

VOL. 77

NO. 4

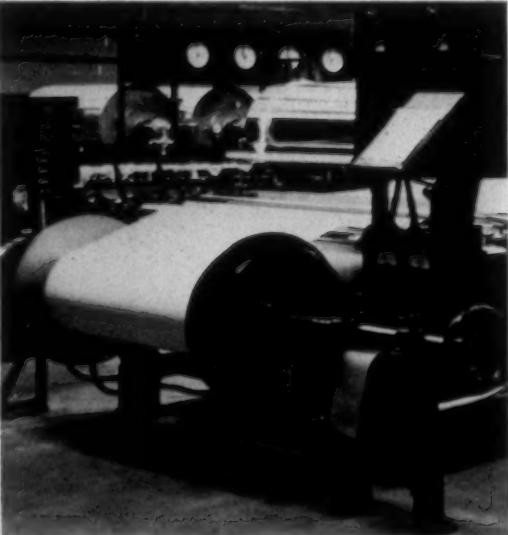
textile bulletin

APRIL • 1951

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Slash your sizing costs

with CHEMICALLY TREATED

ORR SLASHER CLOTH

The Slasher Cloth that

- Resists bacteria and steam deterioration
- Holds its width
- Dresses the yarn properly
- Starts fast
- Lasts long
- Maintains level production

It's NEW! It's DIFFERENT! It's BETTER!

More And More Southern Mills Are Changing To ORR Slasher Cloth

TEXTILE BULLETIN is published monthly by Clark Publishing Co., 218 West Morehead St., Charlotte 2, N. C. Subscription \$1.50 per year in advance, \$3 for three years. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.



Editor, W. C. Cook, Jr., P. O. Box 6, Anderson, S. C.
Sales Agent: J. S. Fallow & Co., 279 Union St., New Bedford, Mass.



The modern main plant of Draper Corporation in Hopedale symbolizes the modern thinking that goes into designing and building the world's finest single-shuttle looms.

Draper automatic looms produce more cloth at less cost throughout the world



DRAPER CORPORATION

HOPEDALE MASSACHUSETTS

"You're Right!"

Your Business Is Different!



Each business has its own peculiar problems.

That is why Commercial factoring is so flexible—a modern method of financing—suited to your particular needs. Immediate working capital is made available through your accounts receivable. Cash is forwarded to you as shipments are made. Yet you sell on your regular terms. Credit losses and collection expense are assumed by us.

Let us tell you how Commercial factoring increases turnover and profits.

COMMERCIAL FACTORS CORPORATION

Fred'k Victor & Achells, Inc.
Established 1828

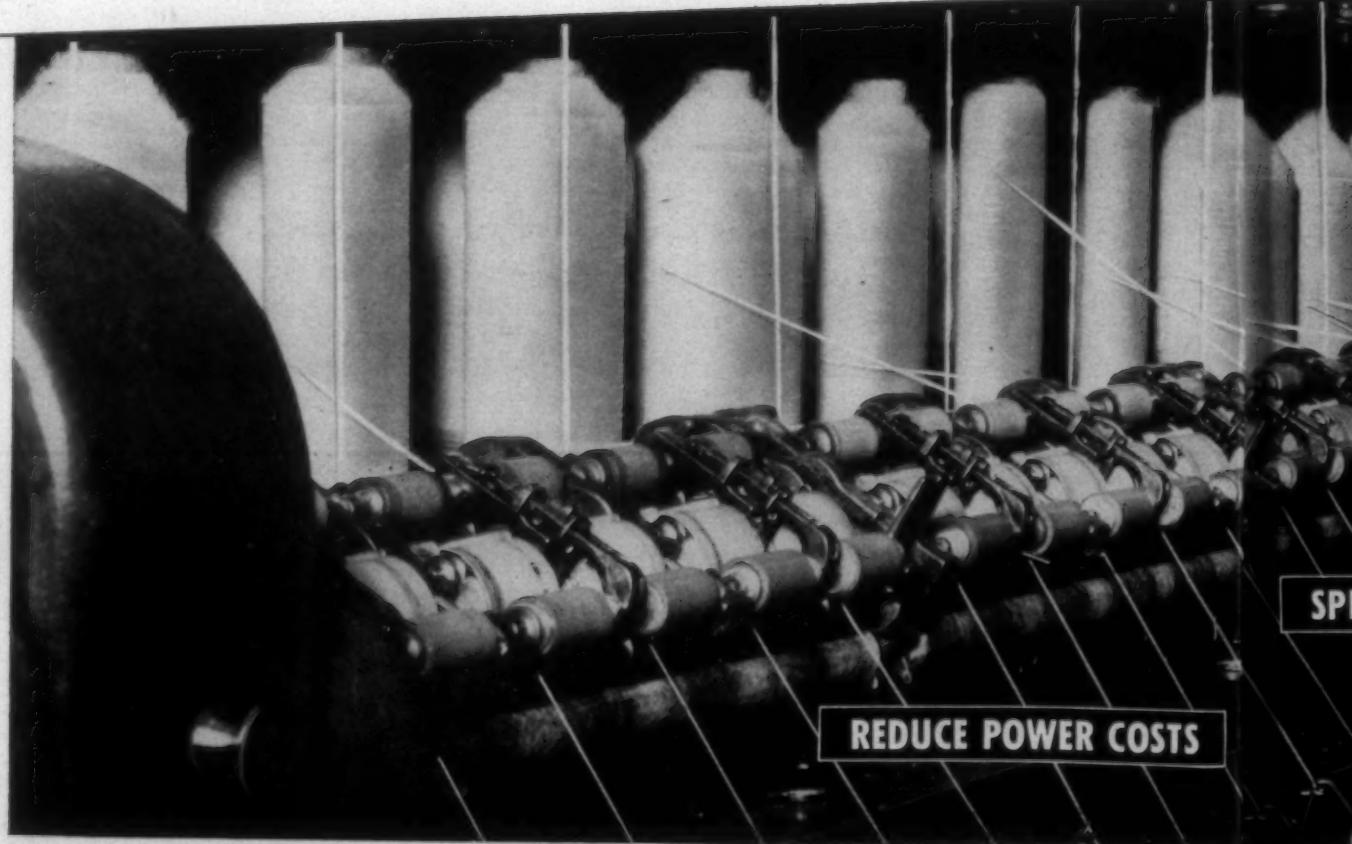
Schefer, Schramm & Vogel
Established 1838

Polaris, Buhler & Co., Inc.
Established 1893

TWO PARK AVENUE, NEW YORK 16

EUGENE G. LYNCH, 80 FEDERAL STREET, BOSTON 10, MASS.
T. HOLT HAYWOOD, WINSTON-SALEM, NORTH CAROLINA

Tests Show How to
CUT BOLSTER WEAR
—Save Replacements



REDUCE POWER COSTS

2/3 rds



*Two-year field tests show that Sinclair Compounded
Lily White Oils, AX, BX, CX, cut bolster wear
up to two-thirds!*

This oil can thus save a lot of bolster replacements—especially important in these days of shortages. Less wear also means less spindle wobble, thus reducing power demand and thread breakage and permitting use of a larger package.

All together, these advantages make Sinclair Lily White Oils important assets to any textile mill.

SINCLAIR TEXTILE LUBRICANTS

Save Wear and Replacement

For lubrication counsel see your nearest Sinclair Representative or write direct to Sinclair Refining Company, 630 Fifth Avenue, New York 20, N. Y.

CUT WOBBLE, THREAD BREAKAGE

SPEED UP, IMPROVE PRODUCTION

SAVE BOLSTERS — SHORTAGES ARE HERE



AMCO Humidification System in weave room of Bread Brook Company, Bread Brook, Conn.

Control regain and assure a **BETTER WOOL PRODUCT** **...INCREASED PROFITS!**

You may be losing more than you think if yours is a "dry-air" mill.

Total weight, after all, is dry wool plus moisture. So when moisture in the air is abnormally low, moisture from the wool evaporates into the air—at the expense of the wool you are processing. Is it any wonder that profits begin to dry up when the air dries out?

AMCO Humidification keeps the air, your biggest single asset, "liquid". It governs surrender of regain; assures better control of weights and yarn counts; reduces fly; improves end products by preserving flexibility, resiliency and pliability.

And very important . . . that perennial troublemaker, static electricity, is effectively routed. All good reasons why it will pay you to consult a trained and experienced AMCO engineer without delay.

Should you already have a modern, efficient humidification system and seek to add *cooling*, AMCO can help you with that job, too. Whether you propose installing a ductless system, a unit duct, or a central station air conditioning system, AMCO can tailor-make an installation to fit your specific needs.



AMCO system in spinning room of some mill

Benefits of controlled humidification

- Elimination of static electricity
- Higher yarn yields
- Less fly waste
- Oil savings through decrease in employed emulsions
- Greater spinning, dressing and weaving efficiency due to retention of moisture in yarn
- More flexibility, resiliency and pliability of yarn
- Better control of cloth weights.

AMCO
HUMIDIFICATION AND COOLING

AMERICAN MOISTENING CO., AFFILIATED WITH GRINNELL COMPANY, INC., PROVIDENCE, R. I. • BOSTON • ATLANTA • CHARLOTTE

Aren't these just the qualities you're looking for in a Softening Oil?

USERS OF

SOL LUSTRE 214

SAY "Yes!"

Finishers and bleachers of cotton fabrics are finding Houghton's Sol Lustre 214 meets all requirements of an outstanding softening agent in starches—without the hazards ordinary softeners present. Sol Lustre remains stable under all normal conditions. It won't discolor whites nor affect any colors. It won't become rancid or produce storage odor. And it's easy to handle and economical.

In a 1% solution Sol Lustre produces the precise plasticizing quality you want in starch finishes. It is also highly efficient as a straight softening oil on any yarn, thread or fabric. Sol Lustre 214 is one of the most versatile textile oils we have ever developed. We urge you to investigate its many applications in your mill. For further information write E. F. Houghton & Co., Philadelphia 33, Pa.

SOL LUSTRE
...a product of

E. F. HOUGHTON & CO.
PHILADELPHIA • CHICAGO • DETROIT • SAN FRANCISCO

Ready to give you
on-the-job service . . .

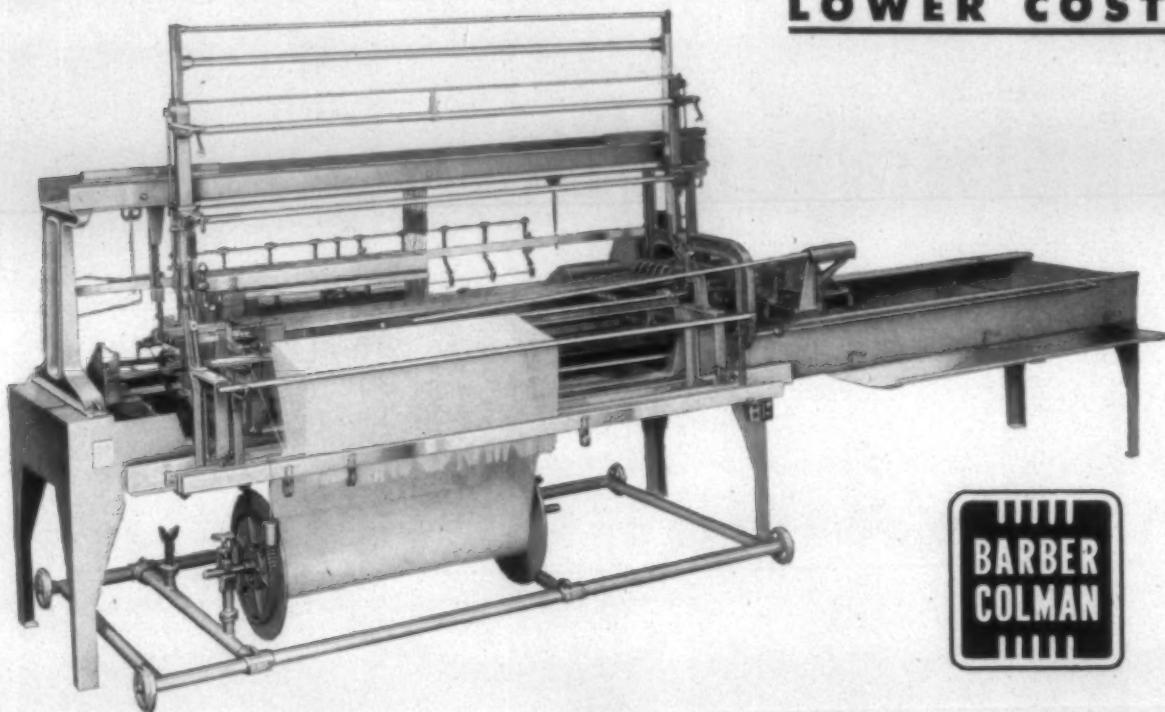


ASK US TO PROVE IT!

The Houghton man will gladly show you a Test Book of fabrics comparing the various qualities of softness obtained by using different softeners.

FASTER REPLACEMENT
STRAIGHTER WARPS

LOWER COSTS



BARBER-COLMAN MODEL E Warp Drawing Machine

The Model "E" Barber-Colman Warp Drawing Machine is designed to cover the needs of a wide variety of weaving mills. Manufacturers of shirtings, broadcloths, lawns, voiles, sateens, ginghams, dress goods, and sheetings, or mills running filament rayon, will find this particular model

extremely suitable. Mills having a predominance of cam loom weaving, or whose cloth construction does not require more than 8 harness and 6 banks of stop motion, and where styles and patterns are frequently changed, will find this model exceptionally useful.

Field reports show up to 4500 Ends per Hour

Will draw warp from 10 to 300 ends per inch

Will draw from flat sheet or 1 x 1 lease

Will draw from single or double beam or split sheet

Will draw 1 x 1 lease in double beam or split sheet

Warp threads are drawn through drop wires, heddles and reed

IN ONE OPERATION

from a pre-determined draft

MACHINE CAPACITY

The Model "E" can be furnished in the following capacities at no difference in cost:

Reed, 8 Harness, 6 Banks of Drop Wires

Reed, 10 Harness, 4 Banks of Drop Wires

DROP WIRE CAPACITY: 9/32" through 3/4" wide

WILL DRAW

- Cotton Yarns
- Filament Yarns
- Spun Yarns
- Woolens and Worsteds
- Monofilaments

HARNESS FRAME LENGTHS	
Size of Machine	Maximum Overall Length of Harness
48	54"
66	72"
86	92"

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

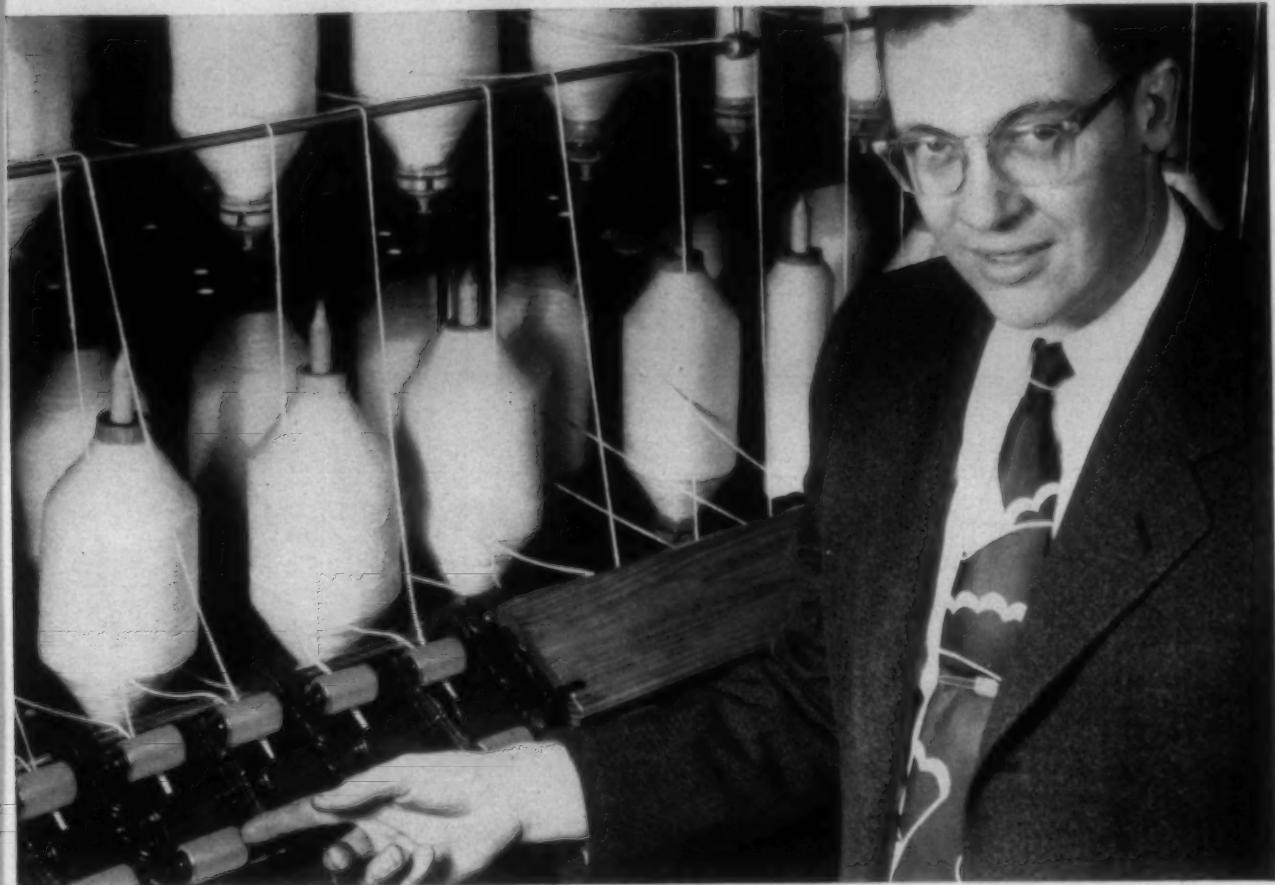
BARBER-COLMAN COMPANY
ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A.

GREENVILLE, S. C., U. S. A.

MANCHESTER, ENGLAND

MUNICH, GERMANY



These cots contain the cure for most lapping

In a most important way, Armstrong's patented Accotex® Cots are different from all others. They contain certain "electrolytes" that eliminate the natural attraction between fiber and cot. Here's how this attraction is set up:

Because of the high humidity in spinning rooms, a microscopic film of moisture collects on both fiber and cot. These moisture layers contain tiny electric charges. When the layers come together as the fiber moves under the roll, the electric charges make the combined moisture layers act like an adhesive. When an end breaks under these conditions, lapping is almost certain to result.

By compounding Accotex Cots with certain electrolytes, Armstrong's rubber chemists dissipate the electric charges on the cot surface. This destroys the electrical attraction between the layers of

moisture on cot and fiber. That is why mill men report that when frames are equipped with Accotex Covers, lapping ceases to be a serious problem.

Because spinning problems differ from mill to mill, Armstrong offers a complete line of specialized Accotex Covers. They are made in straight rubber compounds as well as in combinations of cork and rubber, each in different hardnesses. All have Armstrong's exclusive lap-resistant feature. Whether you spin cotton, wool, synthetics, or blends, you can get a cover especially formulated for your type of job from Armstrong.

Get samples and test them in your own mill. Call your Armstrong representative today or write Armstrong Cork Company, Textile Products Department, 8204 Arch Street, Lancaster, Pennsylvania. Available for export.



ARMSTRONG'S ACCOTEX COTS

one of Armstrong's complete line of textile mill supplies

ACCOTEX APRONS

CORK COTS

ROLL SHOP EQUIPMENT



Charlotte Leather Belting Company



Manufacturers Since 1894

Leather Belting, Leather Packing, Textile Leathers, Long Draft Aprons

314 E. Sixth Street
Charlotte 1, N.C.
Telephone 2-2178-8

J. L. Harkey, Manager

To: Users of Leather Belting, Textile Leathers and
Industrial Leather Products

The interests of Charlotte Leather Belting Company have been purchased from Armour & Company (with the exception of the Curried Leather Department) and the manufacturing of all industrial products will be concentrated in the enlarged, improved Charlotte plant.

Mr. J. L. Harkey will be manager and in charge of all manufacturing. First employed by Charlotte Leather Belting Company in 1919, he has been productive head during the past 12 years.

We take pride in the fact that Charlotte Leather Belting Company has served the South since 1896 and we pledge to do our best to deserve the continued patronage of Southern users of Leather Belting and Textile Leathers.

NOTE WELL:

The same salesmen will call upon you!

The same voices will answer your telephone calls!

The same workmen will make your belting!

The same "Brands," the same good values will continue to be yours!

PLUS:

A fresh intensive personal effort on the part of all of us to serve you even better than ever!

Charlotte Leather Belting Company



Crisp and magnetic colors

can transform a simple frock into a Cinderella Gown.

For colors that make price tags unimportant, always specify

National Aniline Dyes

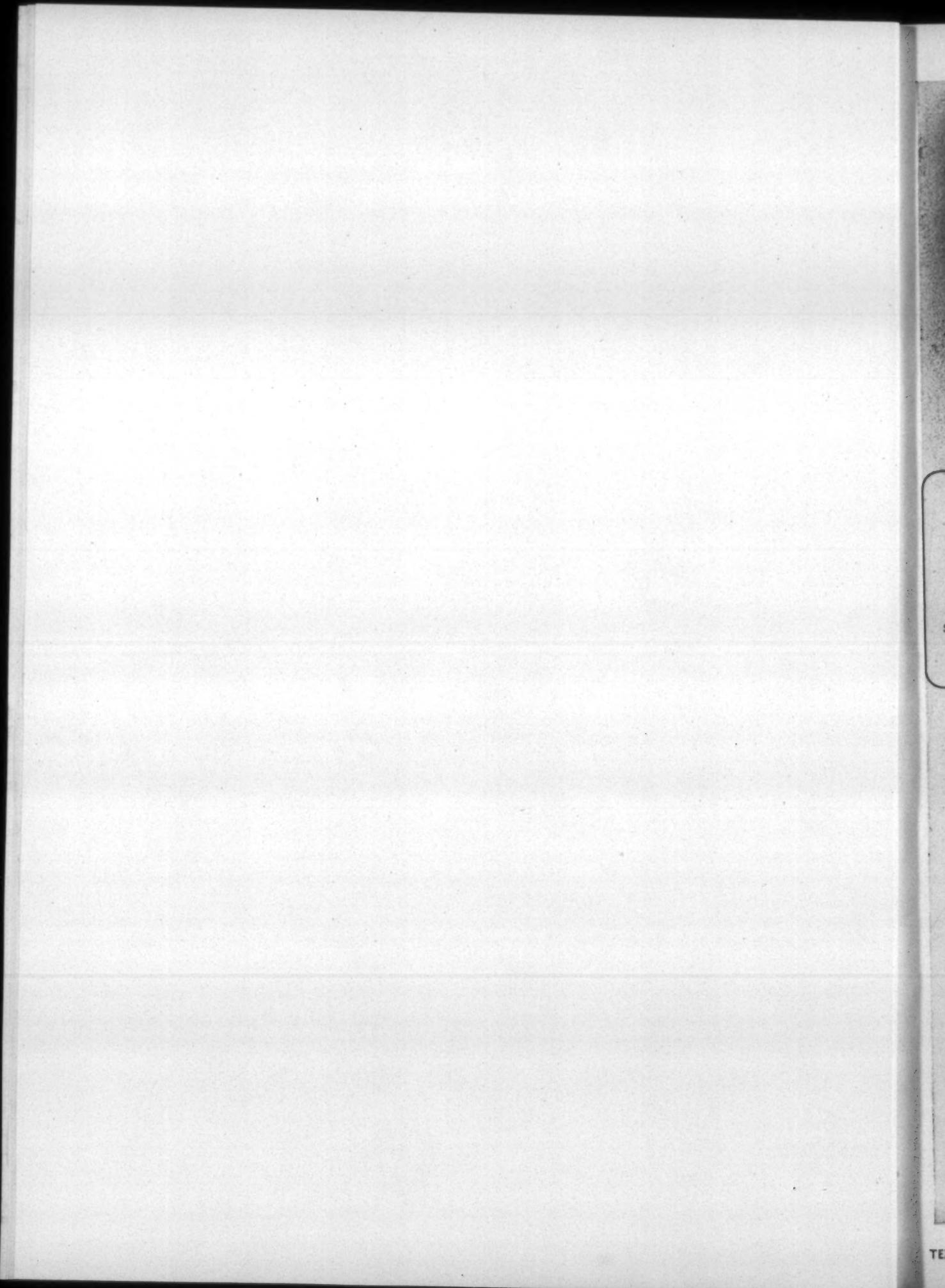
NATIONAL ANILINE DIVISION

ALLIED CHEMICAL & DYE CORPORATION

40 RECTOR STREET, NEW YORK 6, N.Y.

Boston Providence Philadelphia Chicago San Francisco
Portland, Ore. Greensboro Charlotte Richmond Atlanta
Columbus, Ga. New Orleans Chattanooga Toronto





SEVEN REASONS WHY ALKAMERCE is the ideal Mercerizing Penetrant

Hartex Products

Kayon Oils & Sizes
Nylon Oils & Sizes
Kier Bleaching Oils
Finishing Oils
Synthetic Detergents

Conditioning Agents Cationic Softeners
Scooping Agents Cotton Warp Dressings
Splashproof Compounds Wetting-Out Agents
Delustrants Weighting Agents
Leveling Agents Mercerizing Penetrants



1 ALKAMERCE may be dissolved directly in the mercerizing caustic.

2 ALKAMERCE does not lose its wetting power on standing.

3 ALKAMERCE does not form a scum in the caustic.

4 ALKAMERCE is easily washed out of the goods.

5 ALKAMERCE has a low solvent effect on cotton waxes and pectins.

6 ALKAMERCE will not foam or cause sludge formation in caustic recovery systems.

7 ALKAMERCE has a low exhaustion rate, i.e., it is only slightly absorbed by the cotton, thereby permitting larger quantities of cotton to be treated before further additions of penetrant are necessary.

Send for your copy of booklet "Mercerizing and ALKAMERCE — The Ideal Dry Mercerizing Penetrant."

THE HART PRODUCTS CORP.
1440 Broadway, New York 18, N.Y.



So You're Going to "Follow the Sun"?

Well, don't look now, but who are all those people following YOU?

"Perish forbid" that you should take that well-earned holiday, without doing yourselves full justice in the Fine Feathers Dept. That's half the fun.

All right, then . . . here you go . . . into the most active, attractive, competitive clothing market in history. And what do you see and hear, everywhere? "Exclusive style . . . unmatched color . . . patterns in a class by themselves . . . new textures, new feels, new drapes!"

But under all these different style-appeals runs the basic theme: *"Highest fabric quality at most reasonable prices."* Which means simply this: The high-style industry is still based solidly on modern-minded mills whose weaverooms are equipped with high-speed, automatic, convertible C&K Call-Box Looms. And that's why Mr. and Mrs. America continue to get more and more for their clothes-dollar.

Competition begins in the Weaveroom! . . . and that's where C&K begins your profit . . . with the World's Longest Line of Looms



This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Woven Fabrics

Crompton & Knowles LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.
PHILADELPHIA, PA. • CHARLOTTE, N. C. • ALLENTOWN, PA. • CROMPTON & KNOWLES JACQUARD & SUPPLY CO., PAWTUCKET, R. I.

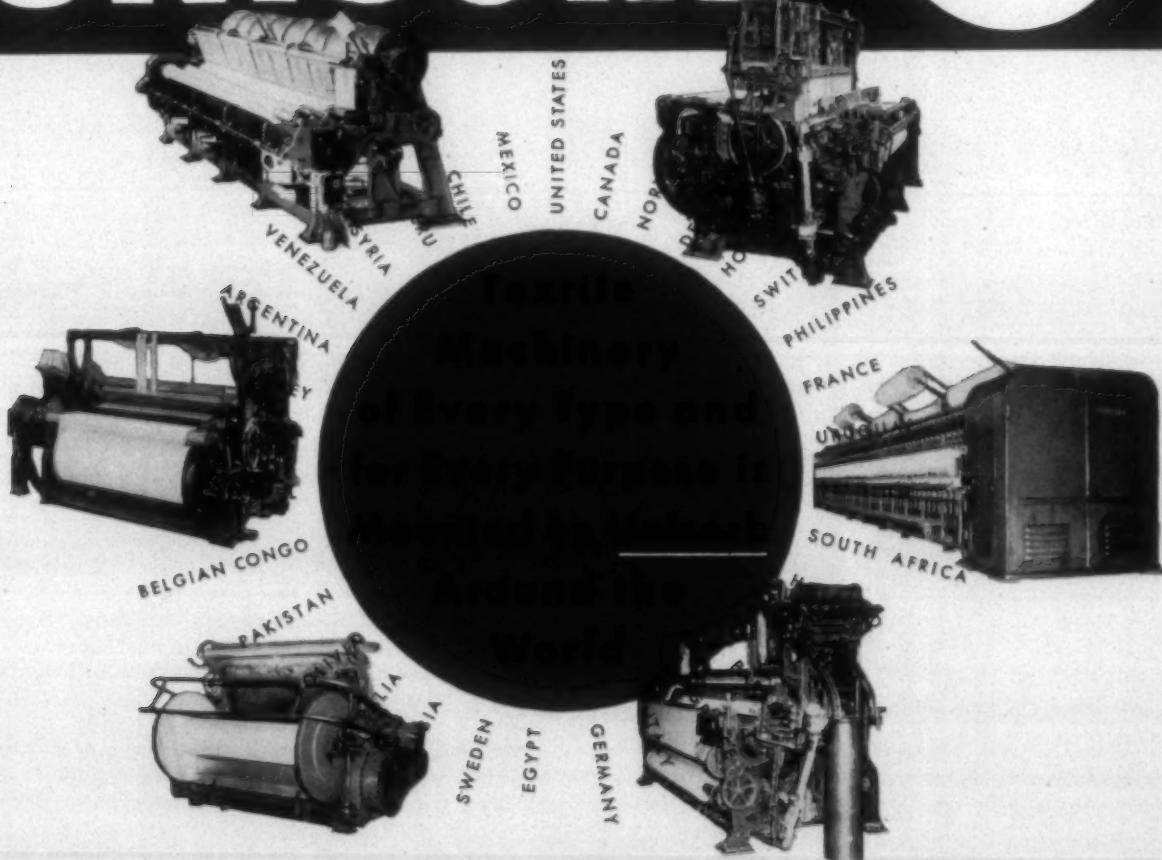
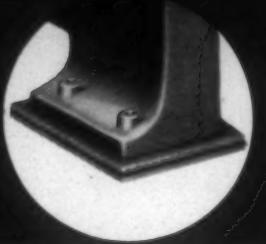
ARE YOU

CHANGING YOUR MILL PRODUCT?
MAKING NEW PRODUCTS?
ADDING NEW MACHINERY?
GETTING A NEW BUILDING?
OVERHAULING YOUR MILL?

Save Floors . . . Protect Buildings . . . Increase Machine Life . . .

ANCHOR ALL YOUR MACHINES ON

UNISORB



UNISORB requires no bolts, no lag screws . . . eliminates old-fashioned, destructive floor drilling.

UNISORB absorbs 60-85% of all transmitted machine vibration and noise . . . often permits higher machine speed, increased production . . . reduces em-

ployee fatigue . . . lessens vibration strain on buildings, floors, machinery.

GET THE FACTS . . . ALL THE FACTS . . . ON UNISORB . . . WRITE . . . TODAY



THE FELTERS COMPANY

210-T SOUTH STREET, BOSTON 11, MASSACHUSETTS

Offices: New York, Phila., Chicago, Detroit, Cleveland, St. Louis

Sales Representative: San Francisco

Southern Representative: Industrial Supply Co., Clinton, S. C.

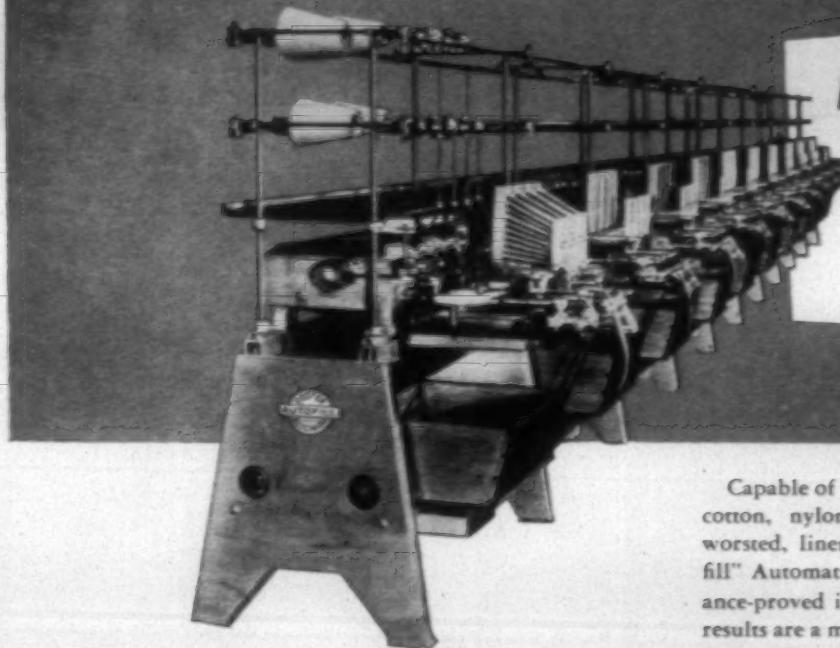
Southwest Representative: Textile Supply Co., Dallas, Texas

Mills: Johnson City, New York; Millbury, Mass.; Jackson, Mich.;

New York City

REPRESENTATIVES IN PRINCIPAL CITIES THROUGHOUT THE WORLD

FOR HIGH PRODUCTION AT LOW COST THE FOSTER-MUSCHAMP "AUTOFILL"



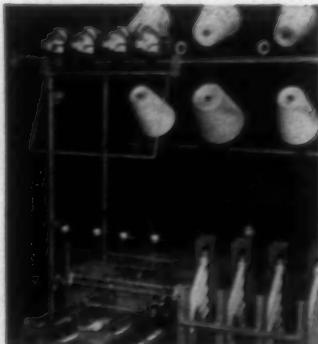
A Fully Automatic
Filling Winder
Built
to Cut Costs

Capable of winding bobbins of all types of yarns, cotton, nylon, silk, rayon, rayon crepe, wool, worsted, linen, etc., the Foster-Muschamp "Autofill" Automatic Filling Winder has been performance-proved in all parts of the world. Production results are a matter of record.

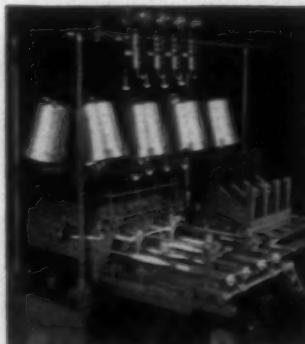
Strongly built units of four spindles each are compact, simple to maintain, with working parts and controls easily accessible. The "Autofill" is completely automatic; requires no skilled labor; and includes among many special features the following:

- Capable of speeds up to 6,000 r.p.m.
- Adjustable for bobbins from 2" to 14" in length.
- Yarn layer locking device prevents sloughing.
- Adjustable automatic bunch builder.
- Mechanical diameter control. No builder wheel in contact with the yarn to cause broken filaments or ridged bobbins.
- Constant spindle speed. Positive drive.
- Maximum production with minimum floor space.

*Send today for Bulletin M-1,
which gives complete details.*



Close-up showing magazine cone supply for cotton.



Magazine cone supply for filament rayon.



Rayon crepe being wound over end from packages at high speed.



Winding filament rayon from parallel packages.

FOSTER MACHINE COMPANY

Westfield, Mass., U.S.A.

Southern Office: Johnston Bldg., Charlotte, N. C. • Canadian Representative: Whitehead & Company, Limited, 1475 Mountain St., Montreal, Quebec • European Representative: Muschamp Taylor Limited, Manchester, England

Visit us at Knitting Arts Exhibition, booth nos. 28-29-30-35-36-37

FOSTER



QUALITY WINDERS FOR ALL TYPES OF YARNS

Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N. Y.

April, 1951

The New Middleweight Champion!

What should suit comfort weigh in at?

More and more men in the know are putting their money on medium weight—not too warm for today's efficient heating systems . . . yet warm enough for all but the more numbing days.

Here's the secret of the growing popularity of rayon for smartly tailored men's suits. Because of this man-made fiber's basic adaptability, it can be made just right . . . fitted to the kind of construction that retains body heat without unnecessary weight.

But remember, comfort is only half the story of this new kind of suit. Rayon has a genius for style as well as comfort. When you see it in 100% rayon or rayon wool, you'll come up with fabrics with a distinctive spring, feel and mobile color evolution heretofore found in only the most expensive materials.

These suits deserve your investigation. Look at their handsome appearance, glance at their reasonable price tags. A brief trial of these easy wearability will show you why many a best dressed winner is saying—"make mine rayon!" American Viscose Corporation, 350 Fifth Ave., New York 1, N. Y.

AMERICAN VISCOSA CORPORATION

AMERICA'S LARGEST PRODUCER OF RAYON

Avisco advertisement makes timely appearance

A lucky break aroused unusual interest in this Avisco public relations advertisement. The bout that established a new middle-weight boxing champion took place the night before the message appeared in the *New Yorker Magazine* . . . the news of the

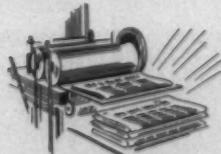
fight tying in perfectly with the headline (written in October when it was decided to tell the success story of rayon medium weight suitings). The ad also appeared in *Time Magazine* in the issue that described the fight.

RAYON 20 YEARS AGO



NEW YORK, April, 1931 — Rayon linings are being given credit for the present upsurge in the men's clothing industry.

NEW YORK, April, 1931 — The current issue of the "Crown News" carries a feature article on "Sombray" the new rayon developed by The Viscose Company.



CHICAGO, April, 1931 — CrownBrand rayon held the feature spot at the Chicago garment show. A wide assortment of daytime and sport dresses were displayed against a background of 30 drapery fabrics.



Textron adopts new Tricot Pre-Setting Process

TEXTRON, INC. is proceeding to take advantage of the benefits offered by the Avisco tricot pre-setting process introduced last year. It is now licensed to make and use the machine in its plants in the United States and Puerto Rico.

Textron will capitalize on the production efficiency this method of pre-setting tricot affords. Important among its advantages is its elimination of tacking and un-tacking the selvage to prevent setting of the curl during dyeing. It makes possible straight course lines . . . prevents "crow's feet" and crease marks . . . controls the stability of acetate rayon tricot while achieving an improved hand. It permits the knitting of longer lots which may be dyed continuously.

Full details on this advanced finishing method will gladly be furnished.

MAKE USE OF *Avisco* 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH

2 FABRIC DESIGN

3 FABRIC PRODUCTION

4 FABRIC FINISHING

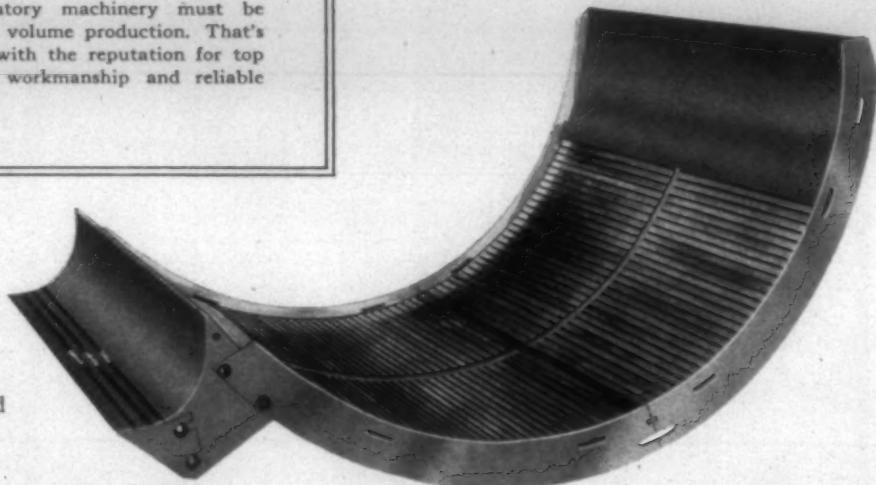
AMERICAN VISCOSA CORPORATION

America's largest producer of rayon
Sales Offices: 350 Fifth Avenue, New York 1,
N. Y.; Charlotte, N. C.; Cleveland, Ohio;
Philadelphia, Pa.; Providence, R. I.

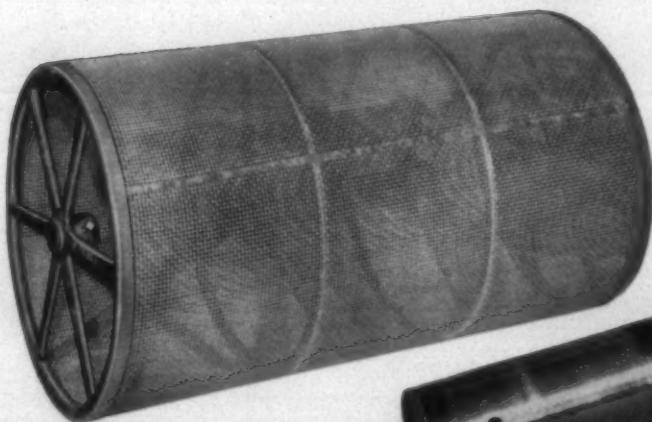
MORE PRODUCTION AT LOWER COSTS with GASTONIA TEXTILE SHEET METAL PARTS

The quality and the profit of your end product starts at the beginning—where preparatory machinery must be geared for efficient, economical volume production. That's our job—a job for specialists with the reputation for top quality products, painstaking workmanship and reliable service.

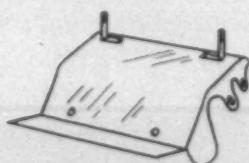
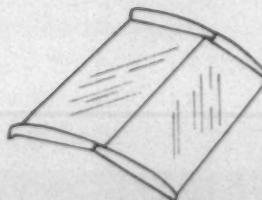
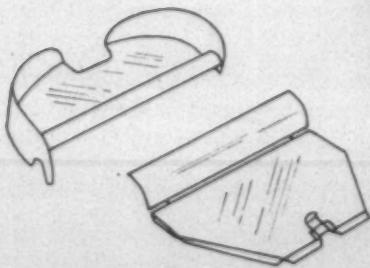
Standard type rib or perforated Card Screens are precision built on special jigs. Every screen is inspected and double checked for accuracy and tolerance.



Picker, Condenser and Waste Machine Screens of maximum strength and durability are constructed of the best materials available.

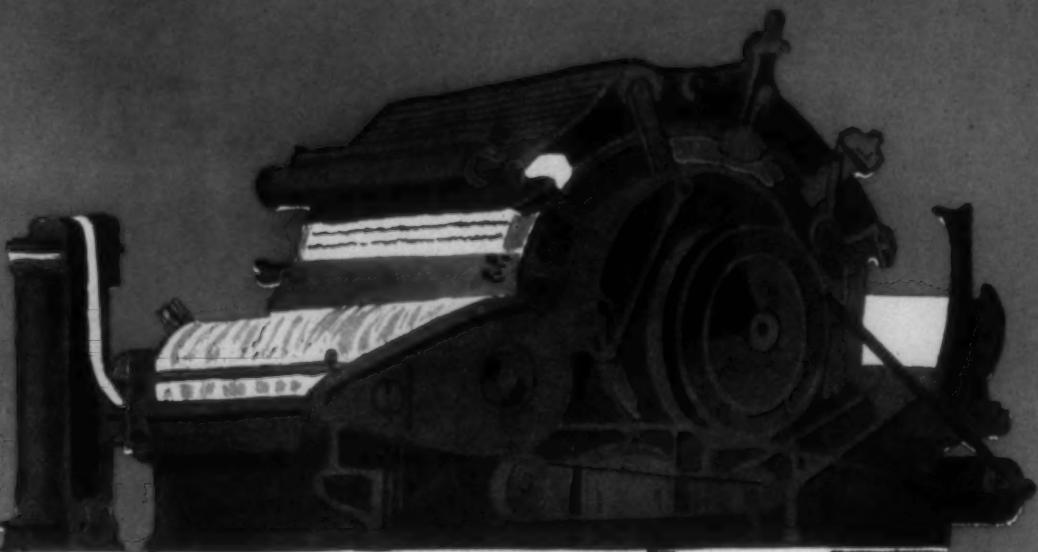


New and rebuilt Cylinders are dynamically balanced to reduce vibration to an absolute minimum.



Years of practical experience—the finest of raw materials—and precision machinery in the hands of skilled workmen go into every product.

GASTONIA TEXTILE SHEET METAL WORKS, Inc.
GASTONIA, NORTH CAROLINA
A SHEET METAL WORKS SERVING TEXTILE MILLS



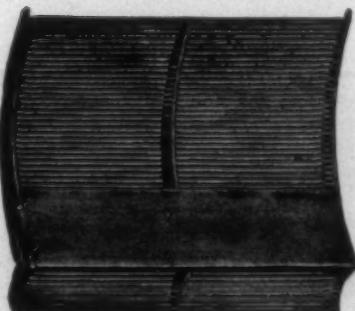
Stop Losing Dollars in Card Fly Waste!

If you're finding good spinnable staple mixed in with the moats and trash under your cards, it's time you installed *Jenkins Card Screens*.

Jenkins card screens are engineered to set closely to your cylinder. Absolute uniformity in every part makes possible the perfect settings—impossible with inferior or damaged screens—which prevent excessive air current from blowing good staple into fly waste.

Improved grooving and patented grid bar construction, developed and used exclusively by Jenkins, assure you of maximum screen efficiency. Jenkins manufacturing and rebuilding service is backed by 37 years of experience, fully guaranteed.

You don't *have* to put up with costly, continuous waste under your cards. Why not talk to a Jenkins representative about it?



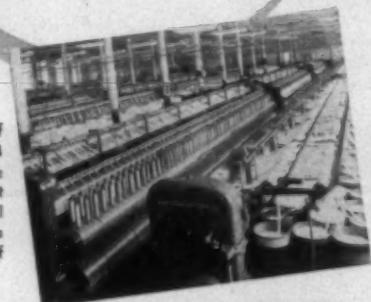
JENKINS

ENGINEERED PRODUCTS

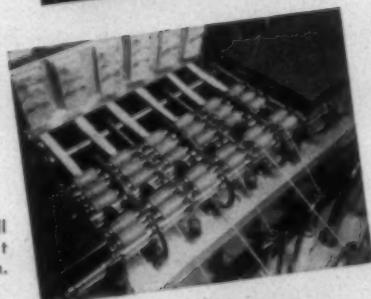
JENKINS METAL SHOPS • GASTONIA • NORTH CAROLINA

H & B ROVING MACHINERY

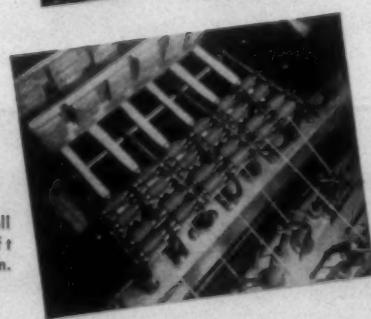
Installation of
H & B 8 x 4
and 9 x 4½
High-Draft
Slubbers — all
suitable for a
wide range of
hank sizes.



H & B 5-Roll
High-Draft
Roving System.



H & B 4-Roll
High-Draft
Roving System.



H & B AMERICAN MACHINE CO.

FACTORY, EXECUTIVE OFFICES AND EXPORT DIVISION • PAWTUCKET, R. I. U. S. A.
Branch Offices: Atlanta, Ga. — 815 Citizens and Southern National Bank Bldg.
Charlotte, N. C. — 523 West 4th Street
Greenville, S. C. — 1510-11 Woodside Bldg.

Builders of
MODERN
TEXTILE
MACHINERY

*tailored to
fit your needs*

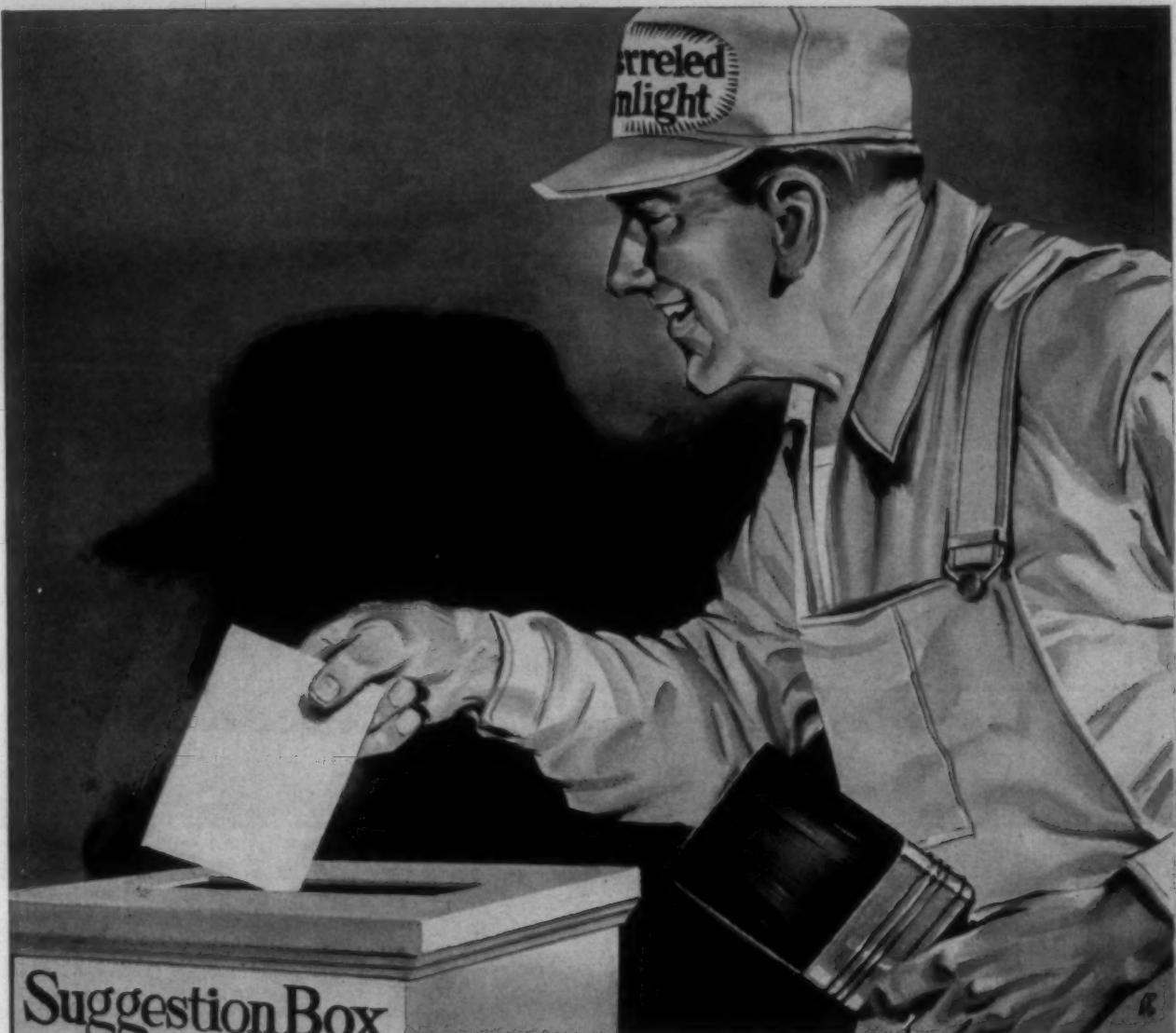
H & B Roving Machinery, whether High-Draft or regular, has been developed to a high degree of efficiency over a period of years and today the many H & B mill installations reflect the industry's widespread acceptance of this modern card room equipment.

The H & B High Draft Roving System is manufactured with either a four or five-roll drafting arrangement and each is suitable for a wide range of hank sizes. The drafting system contains positive roll weighting by means of a streamlined saddle and weighting assembly. Drafts are easily distributed — intermediate draft adjustments can be made without changing the overall draft. It is now common knowledge that high-draft roving cuts costs by eliminating from one to three operations.

With the advent of super high-draft spinning, however, the trend has been to larger and larger roving packages. H & B can readily and easily conform to the trend by offering its three line, 12 x 6 slubber or its four or five-roll, 10 x 5 slubber, depending on the mill organization. For example, with H & B's new Casablanca Super High-Draft Spinning System, certain counts can be spun from .60 or .75 hank single in the creel. This particular hank size can be made on a three-roll conventional slubber.

Whether conventional or high-draft, the same excellent design, materials and quality workmanship are all included in the manufacture. Each machine is specified and built to conform to a mill's organization plan . . . tailored to fit your needs.

The H & B High Draft Slubbers feature a patented Bakelite Scroll Condenser. This Condenser prevents the flaring and spreading of the fibers and simultaneously folds all short fibers into the center by condensing them into a compact sliver. This is accomplished without disturbing parallelization and sufficient false twist is inserted to assure better control in the final drafting zone. No other High Draft Slubber on the market today offers better fiber control or flexibility.



Suggestion Box

An Idea that Really Pays Off

It couldn't come from a better source. After all, a painter . . . his time and labor . . . represents eighty per cent of the total cost of a paint job. And when a painter suggests that you forget about price per gallon and start buying paint on a *performance* basis, he's putting money in your pockets.

This simple test will prove it. Take a gallon of Barreled Sunlight and a gallon of any other paint you want to name and thin each according to directions on the cans. First thing you'll notice is that Barreled Sunlight gives you more paint *ready for the brush* . . . which means, of course, you can save on gallonage. But of *far greater importance*, let your painter test each *on the wall*. See how much better Barreled Sunlight looks . . . how much better it hides . . . how much more "yardage" you get in an hour of painting time.

No wonder so many leading plants who have

made this test have standardized on Barreled Sunlight — some for as long as forty to fifty years.

Talk it over with our representative. Write, and he'll gladly call.

BARRELED SUNLIGHT PAINT CO.
1-E Dudley St., Providence, R. I.



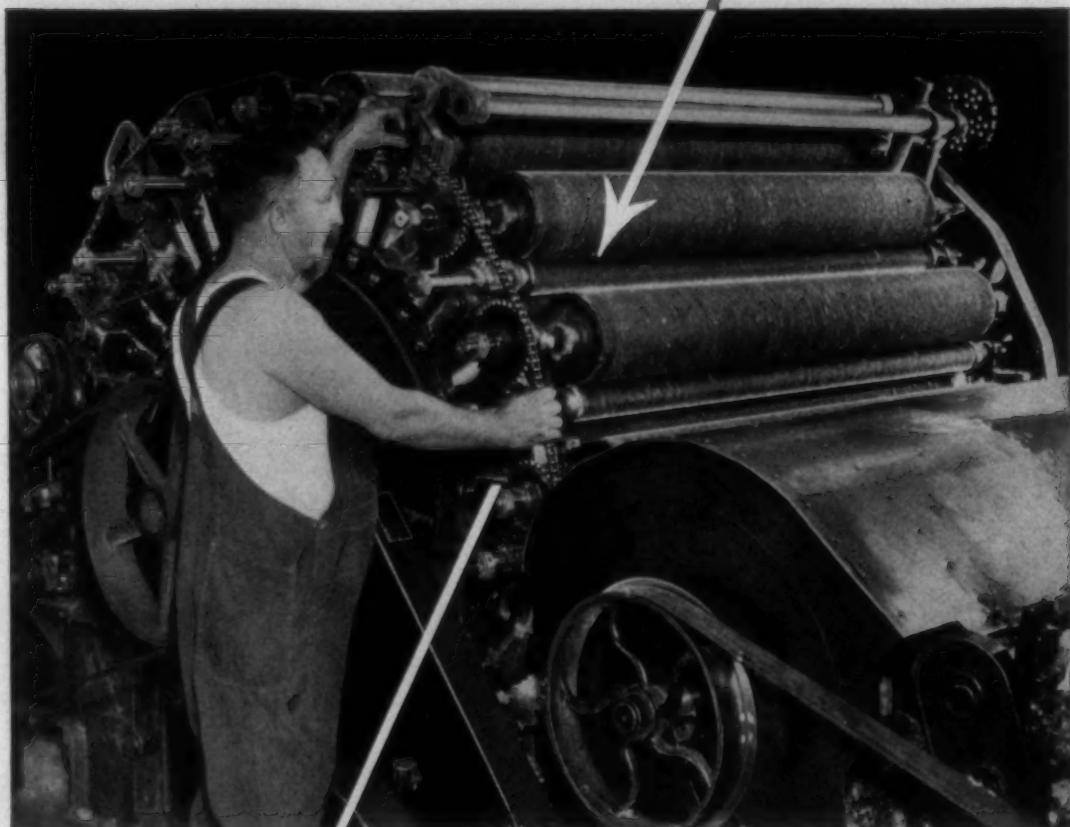
Barreled Sunlight Paints

In whitest white or clean, clear, pleasing colors,
there's a Barreled Sunlight Paint for every job

IT ALWAYS COSTS MORE NOT TO PAINT!

For over half a century those who know the best in paints . . . for all types of buildings . . . have strongly insisted on famous Barreled Sunlight

A CARD IS NO BETTER THAN ITS CARD CLOTHING



That's why a relatively small investment in Tuffer Card Clothing gives such a handsome return. Its uniform, precise construction permits the carder to make the most of his skill and get full production from the carding machines.

Tuffer is the proved card clothing . . . proved in woolen and cotton mills throughout the industry. Specify it on your next order . . . let it prove itself on your cards.

HOWARD BROS. MFG. CO. WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga. and Gastonia, N. C.

Branches: Philadelphia, Pa. and Blanco, Texas

Direct Representation in Canada

A-2

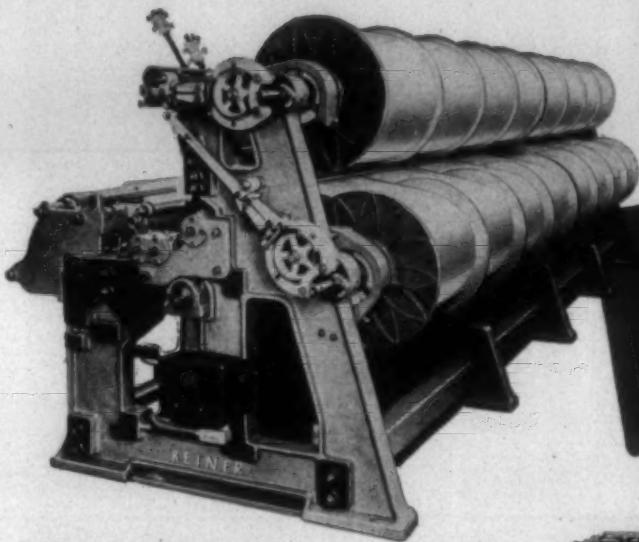


IMPROVES PRODUCTION ALL ALONG THE LINE

in ACTION

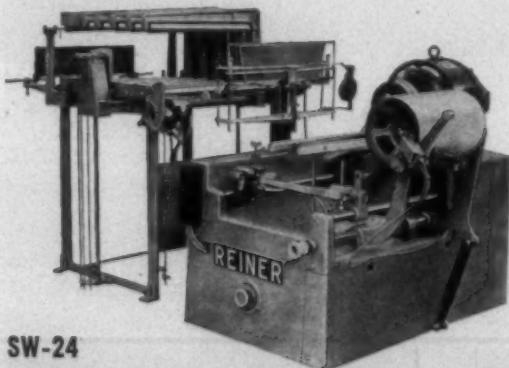
— at the KNITTING ARTS EXHIBITION
Mill-Proved

REINER MACHINES



TRICOT MACHINE 168"

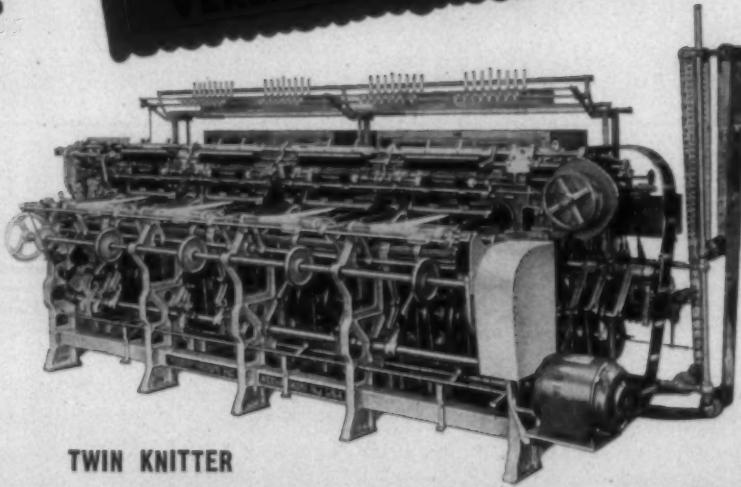
The most versatile machine of its kind. 2 or 3 bar—chain link or pattern wheel drive—long needle, heavy duty models for coarse gauge material—available in 168" and 84" widths—gauges from 14 to 36—positive cloth take-up—automatic oil feed lines throughout—many other features. Since Summer, 1945—750 of these machines have been installed in mills all over the world.



SW-24

The SW-24 Sectional Beaming Machine is built to warp nylon, filament rayon, spun rayon, cotton, wool, worsted, etc. It takes spools up to 24" in length with flange diameters up to 24". Adaptable to multiple spools for the milanese and narrow fabrics trades. We offer all types of beamers and warpers.

DEPENDABILITY
QUALITY — SPEED
VERSATILITY — ECONOMY



TWIN KNITTER

Available up to 66 gauge. For finest gauges the Reiner Twin Knitter is the answer—it produces unexcelled full fashioned stockings in many mills—suitable for all types of operations, for any needed quantities—attachments are available for perforation, ringless, fancy, and colored heels—loopless toes—non-run—15" needle bar—machines are delivered fully assembled—need no air conditioning for their operation.

OTHER REINER MACHINES

Simplex (Double Knit) Machines—Kayloom Machines—Raschel Machines—Magazine Creels—Single Type Creels—Truck Creels—Schiffli Embroidery Machines (10 and 15 yards) with Automats or Pantographs—Bobbin Winding Machines (for Stitching and Quilting).

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**Booth Nos. 16 to 23-B
KNITTING ARTS EXHIBITION
ATLANTIC CITY, N. J., Apr. 30—May 4**

ROBERT REINER INCORPORATED

550-564 GREGORY AVENUE

10 minutes from Time Square by direct bus

WEEHAWKEN, N. J.



For the **TEXTILE INDUSTRY**

⋮

Cotton Rolls

Cotton and Wool Rolls

Combination Rolls

Husk Rolls

Paper Rolls

Embossing Rolls

Friction Calenders

Schreiner Calenders

Chasing Calenders

Rolling Calenders

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Seam and Slub Detectors

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Drying Machines

Mangles

Padders

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Mist-Spray Dampener

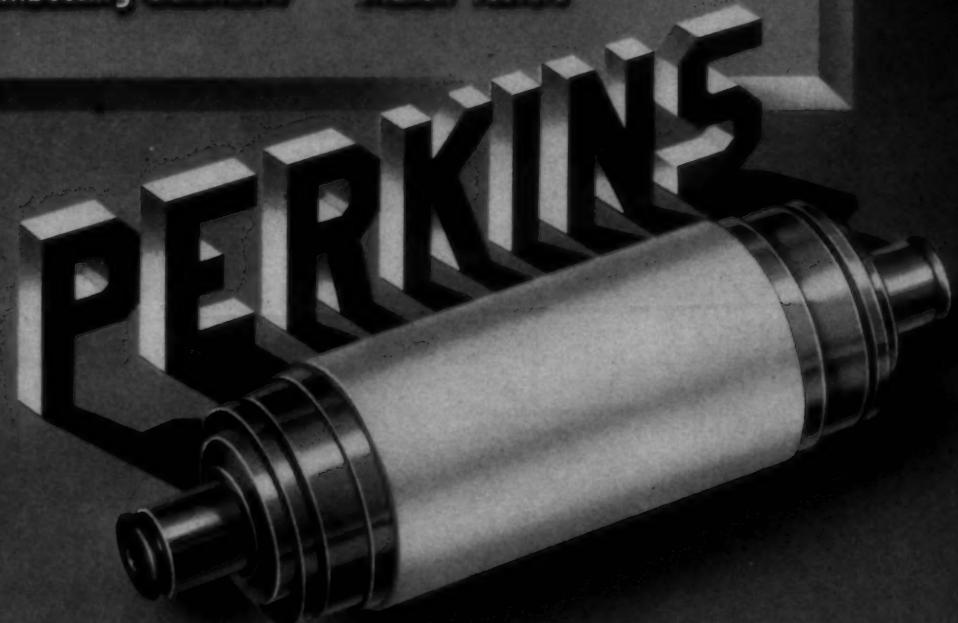
Automatic Tensionless Dye Jigs

Wool Fiber Conditioners

Plastic Embossing Machines

Hydraulic Power Units

Mullen Testers



a new



CORK COT

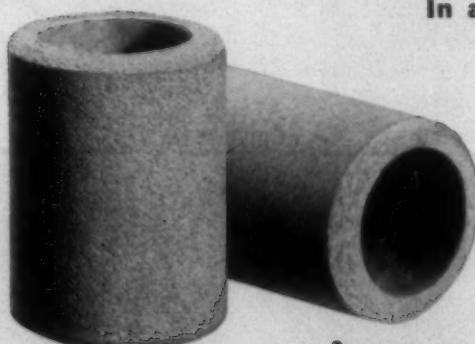
- EASIER TO APPLY
- COSTS LESS
- LASTS LONGER

SONOCO'S *UNIFLEX*

A special elastic lining allows the new SONOCO Uniflex Cot to stretch easily onto any size roll. This saves time and labor and materially reduces total assembly costs.

It fits oversize and undersize rolls equally well... stretching over the big ones and squeezing tightly to the smaller ones. This prevents elongation... means better performance and longer wear. It can be easily removed for recovering.

In addition . . . the UNIFLEX Cork Cot actually costs less than other cork cots.



A test run in your own mill may be secured by writing Sonoco at Hartsville, South Carolina.



Sonoco Products Company

DEPENDABLE SOURCE OF SUPPLY

Announcing the
Uster "Universal"
Evenness Tester

Universal in Range
Universal in Speed
Controls Quality
Controls Production Methods



"Universal" Tester, Recorder
and Electronic Integrator

The Standard by Which You Can Judge, Bought and Sold



Electronic Integrator



Eight-slot Measuring Comb

"UNIVERSAL" EVENNESS TESTER ELECTRONIC INTEGRATOR

The

USTER

Wool
Jute
Flax
Cotton
Staple—
Synthetics
Etc.

The Uster "Universal" tests any weight material from the heaviest to the lightest—wool tops, sliver, roving, and yarn of any count. Its wide range of built-in unwinding speeds includes 2, 4, 8, 25, 50, and 100 yards/min.; with paper speeds of 2 1/5", 1", 2", 4", and 10" per min. It is truly "Universal" in testing speed, recording speed, and in the range of materials and weights handled. No other tester even approaches its versatility.

By testing a marked piece of material through every process from carding through finished yarn, the Uster accurately indicates exactly which piece of equipment is responsible for irregularities. Corrections can then be made to maintain any pre-determined standard of quality, saving time and money in the process.

All Uster Testers are fully installed, and personnel trained in its simple and rapid operation. No expert operators are needed.

50% of yarn being spun today is tested on the Uster and now the "Universal" adds high speed and unmatched versatility. Every yarn mill, yarn seller, and yarn buyer needs a Uster "Universal"—the standard by which yarns are made, bought, and sold.

The Electronic Integrator: This machine eliminates all need for manual calculations. It automatically computes the average percentage of variation from the findings of the Uster Tester and thus provides instant and significant figures . . . also speeding the testing process materially. In mills where the Tester is in continuous operation, the Electronic Integrator should always be used.

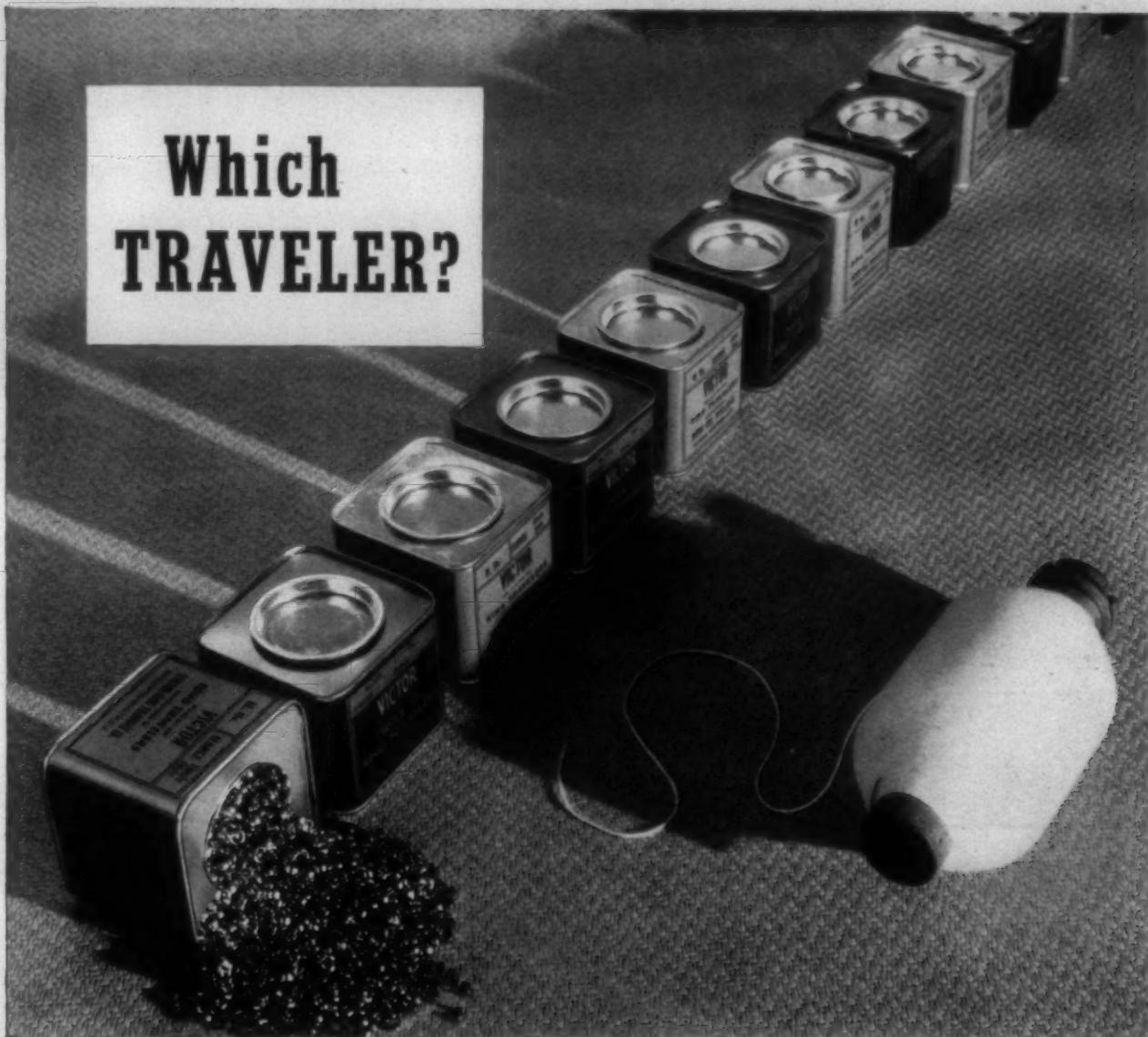
In Canada: Hugh Williams & Co., 47 Colborne Street, Toronto, Ontario

USTER

COLFOR CORPORATION, NEW YORK, N. Y.

42 Bayview Street, Toronto 1, Ontario, Canada

Which TRAVELER?



NO two fibers run exactly alike. For example, a 20's synthetic or blend yarn requires a traveler of a different size and type than that used in running cotton yarn of the same number, for best results in spinning.

"Guesswork" and haphazard probing to find the right traveler uses up valuable time, puts you "on the spot".

If your ends down are excessive, if your quality and production are

off, make the one smart move that has helped so many mills gain greater productivity. Talk over your trouble with a Victor Service Engineer.

Mill-trained, every Victor Service Engineer is a specialist in traveler applications, has often helped clear up the most puzzling spinning and twisting problems. Whether you are running conventional fibers, synthetics, or blends — he can often make other valuable sug-

gestions for improving yarn quality and production.

Write, wire or phone our nearest Victor office for prompt, friendly service. There's no obligation.



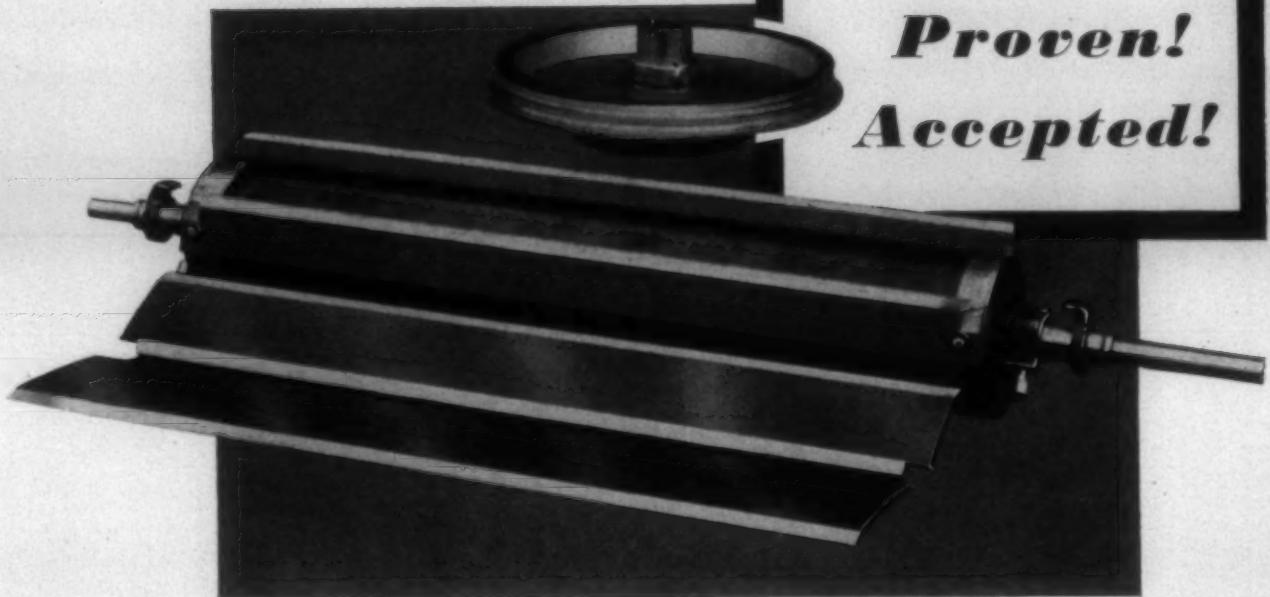
VICTOR
Ring 
Travelers

VICTOR RING TRAVELER COMPANY

PROVIDENCE, R. I. 20 Mathewson St. Tel. Dexter 1-0737

GASTONIA, N. C. 358-364 West Main Ave. Tel. 5-0891

Tested!
Proven!
Accepted!



THE GOSSETT IMPROVED CARD FANCY

***Eliminates Lumps and Flakes
When Carding Synthetics***

It is precision built machined to your specifications and tolerances by GOSSETT technicians. The extra long spring steel wire fillets are guaranteed to fluff all synthetic fibers from the card cylinder thus enabling the doffer to pick them off evenly. Further, the GOSSETT Card Fancy fluffs the synthetic fibers so well that the doffer will pull off and make as good a sliver as you have ever seen.

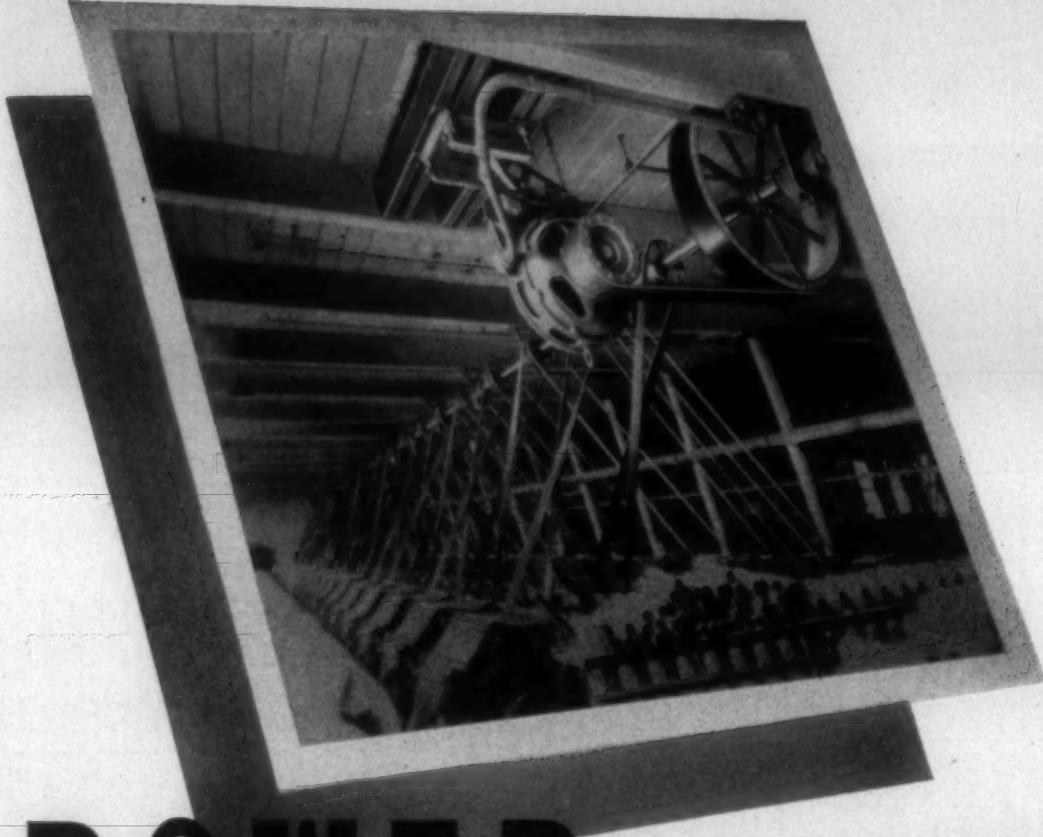
When you install the improved GOSSETT Card Fancy there will be no more excess loading on the cylinder. Write at once for full particulars and estimated cost.

B. W. GOSSETT, President
D. W. SMITH, N. C.-Va. Representative

E. C. MASON, Sales Manager

GOSSETT MACHINE WORKS, INC.

GASTONIA, NORTH CAROLINA



POWER *Unlimited!!*

THROUGH MODERN FLAT LEATHER BELTING

Write or call

for free folder:

"Power Unlimited"

Modern flat leather belting, as produced by Southern Belting Company, *will do more than the job demands!* More power! Longer life! Greater efficiency.

The outstanding performance of "Southern" belting is directly attributable to modern manufacturing methods developed by our engineering and research staffs. These are the ever-inquiring minds that have eliminated stretch and separation of laps and plies and insured peak performance of "Southern" belting.

These are the reasons why we *unconditionally guarantee* that "Southern" flat leather belting will comply with the most rigid performance specifications.

SOUTHERN

*Quality is an old
"SOUTHERN" Custom*



Belting

COMPANY

236 FORSYTH STREET, S. W.

ATLANTA 2, GEORGIA

COTTON ROVING AND SPINNING



WOOL AND WORSTED SPINNING



SYNTHETICS AND BLENDS



In every branch of the Textile Industry

THERE'S A NEED FOR

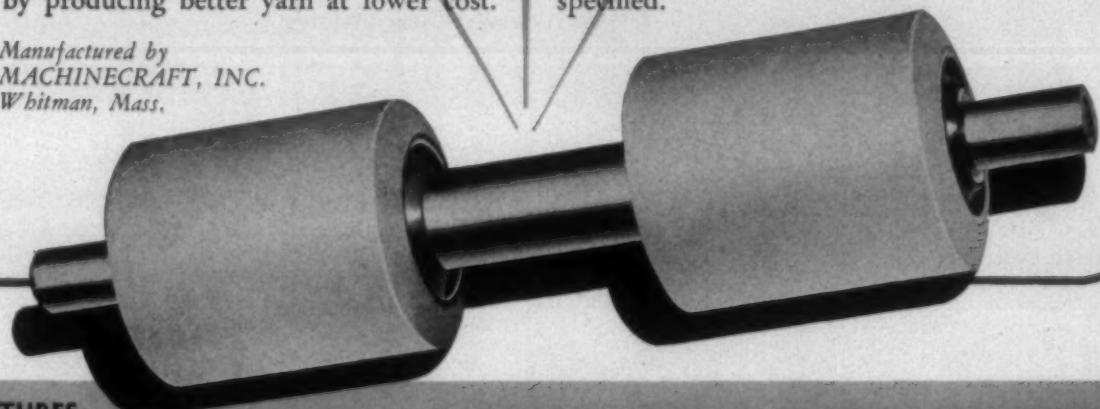
WHITIN-CLIMAX*

BALL BEARING TOP ROLLS

Enthusiastic testimonials from leading mills in all branches of the textile industry prove that Whitin-Climax ball bearing top rolls pay quick dividends by producing better yarn at lower cost.

Whitin has adopted these rolls as standard for cotton roving and spinning, wool and worsted spinning and American System equipment, when anti-friction rolls are specified.

* Manufactured by
MACHINECRAFT, INC.
Whitman, Mass.



FEATURES:

1. Reduction in oiling costs
2. Elimination of ends down when starting machine
3. No oil drip or stains on cots
4. No oil stained fibers
5. Perfect rotating synchronization of top and bottom rolls
6. Improved yarn quality
7. Improvement of fiber control in drafting zone
8. Reduction in roll picking
9. Eliminates lapping of lint on journals
10. Less machine down time
11. Elimination of wear on cap bars and saddles
12. Precision manufacture permits easy interchange of parts
13. Available with standard coverings, as specified

Whitin MACHINE WORKS

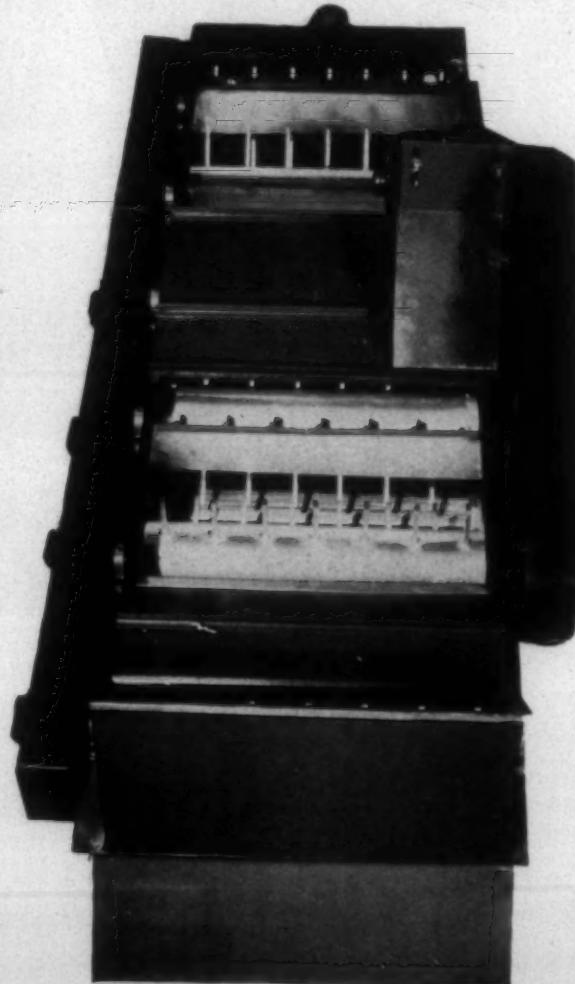
WHITINSVILLE, MASSACHUSETTS
CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANSBURG, S. C. • DEXTER, ME.

*You will get Cleaner Cotton with the
THORNBURG Air-Free CLEANER

It is carefully engineered

Employs mechanical and centrifugal force to progressively open and clean cotton or other fibres through six individual cylinders. Revolving beaters open and pass it over 225 vibrating, adjustable, non-choke grid bars. Centrifugal force and gravity opens the stock and removes motes, sand, dust, leaf, fly, and other foreign matter.

★ We are so sure of the job this Cleaner will do that we are willing to put one in your mill *on 30 days trial without obligation to you*. We will furnish the motors—you furnish the switch and do the wiring.



Why it is Air-Free

So that there won't be any air movement to obstruct the centrifugal action of the beaters upon the fibre and no air current to carry light leaf, etc., through with the cleaned cotton. Dust, motes, fly, leaf, and other foreign trash is loosened, separated, and permitted to fall by force of gravity through the grids, without interference by air currents, into the large refuse chamber.

THORNBURG AIR-FREE CLEANERS HAVE BEEN INSTALLED IN A NUMBER OF THE SOUTH'S LEADING MILLS AND THESE MILLS REPORT EXCELLENT RESULTS ARE BEING OBTAINED.

SPECIFICATIONS:

Width 52 in.—Length 9 ft. 4 in.—Height 8 ft. 5 in.—Weight approx. 2,000 lbs.

We shall be glad to send an engineer to your mill to discuss your cleaning and opener problems.

Manufactured by

THORNBURG MACHINE WORKS, Inc.

DALLAS

Phone 6829

NORTH CAROLINA



Gulfspin

keeps spindles clean!

Here's why:

- 1. Resists formation of sludge**
- 2. Prevents sludge from depositing on spindle surfaces**

Spindle blades and bolsters stay clean when they are lubricated with the new Gulfspin.

Here is the important reason! Gulfspin not only has the inherent ability to resist the formation of harmful sludge, but also prevents sludge from depositing. And during periods when oil levels are low, Gulfspin's protective film insures against the formation of rust. Thus the need for costly cleaning of spindles and bolsters is eliminated—parts wipe clean easily.

Gulfspin has excellent oiliness characteristics. It reduces the rate of bolster wear experienced with ordinary oils, insures freedom from spindle wobble.

Gulfspin, unlike conventional spindle oils, does not appreciably increase in viscosity even after extended use. This accounts for reports from

users telling of substantial savings in power costs.

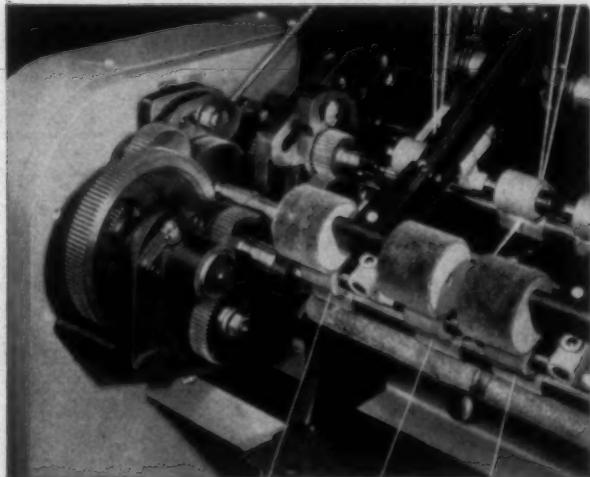
See for yourself—on your frames—that this new spindle oil is better in every way. Or write today for copy of a pamphlet on this outstanding new oil.

Gulf Oil Corporation · Gulf Refining Company
Gulf Building, Pittsburgh 30, Pa.





SACO-LOWELL



Gear cover raised to show the draft gearing, and with drafting rolls down in operating position.

WORSTED SYSTEM

for Worsted and
Long Staple Synthetics

SACO-LOWELL's SS-4 Spinning Drafting System is a completely new method of drafting wools up to 6" in staple length, and longer. Heavy, cumbersome, complicated equipment heretofore seen in the average worsted yarn spinning mill is being replaced with a series of single machines, free from intricate and sensitive sub-assemblies which are hard for the operative to understand, difficult to adjust, and expensive to maintain.

A COMPLETE TECHNICAL DESCRIPTION of this new system is given in a 16-page brochure. You are invited to write for the "Saco-Lowell System for WORSTED SPINNING."



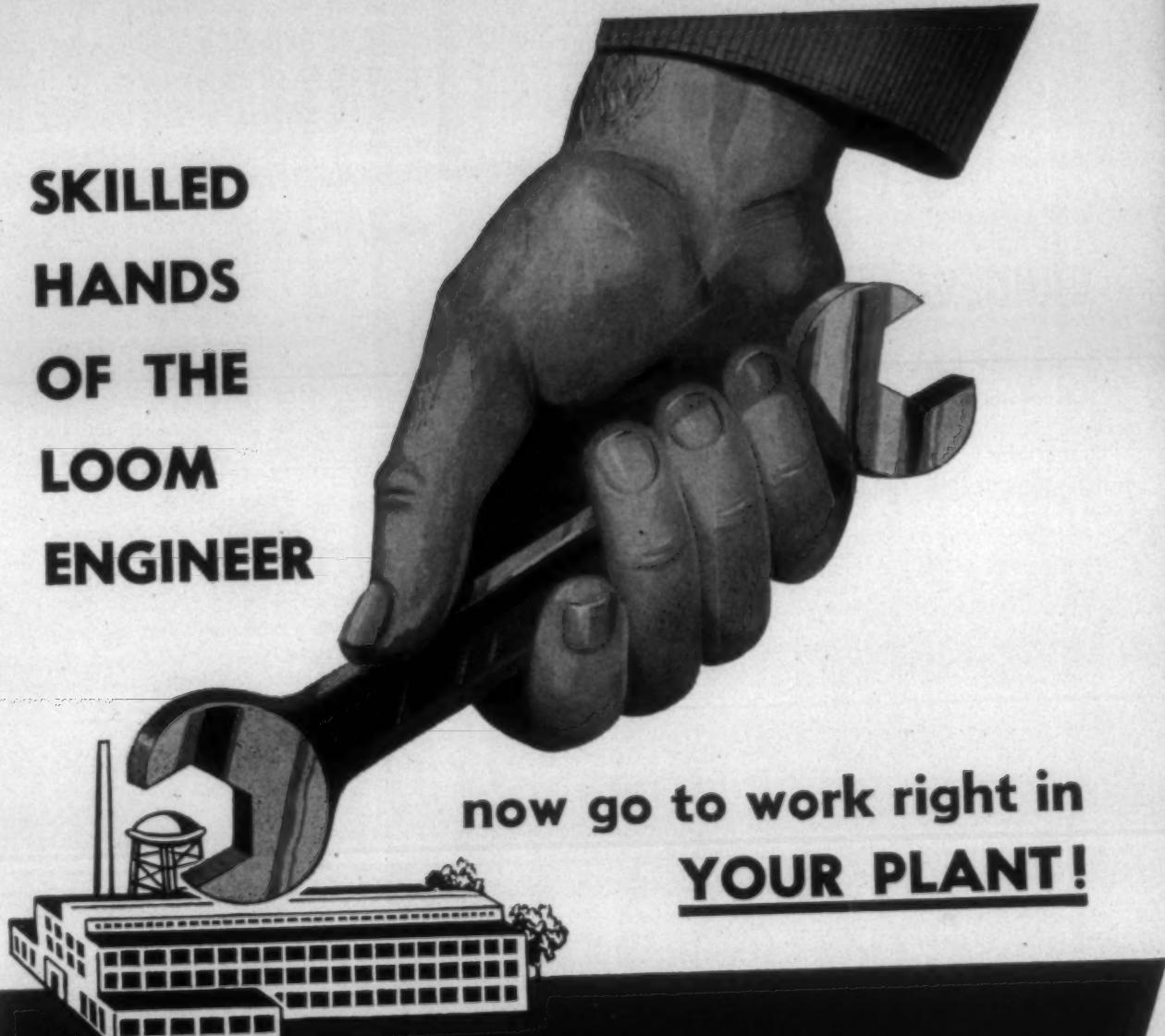
SACO-LOWELL

60 BATTERY MARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD, MAINE and SANFORD, N. C.

SALES OFFICES: CHARLOTTE • GREENVILLE • ATLANTA

SKILLED HANDS OF THE LOOM ENGINEER



now go to work right in
YOUR PLANT!

New England Agent:
William R. Fox
Box 380
Providence, Rhode Island

LOOM MODERNIZATION SPECIALISTS



Emil V. Wilson Co., Inc.
1210 NEW BUNCOMBE ROAD PHONE 3-3643
Greenville, South Carolina

You'll find these products
in **SAFE HANDS!**



HANDEEZ

a *must* where hands come in contact with lubricating oils . . . Lifts shop grime from pores, gently but *thoroughly*.

Contains a sterilized vegetable emollient which acts as an absorbent. Non-irritating . . . keeps skin free of cracks where dermatitis starts. In powder form—bulks BIG at low cost.

BORSUDS

A borated, soluble hand cleaner for heavy grime on tender skin. Contains finest medium and low titer soaps (the lower the titer the more quickly soluble the soap). Lathers richly even in fairly hard water, cannot clog drains.

VOLAX

Extra-heavy duty hand cleaner. Removes ground-in grime, printing ink, stubborn dirt. Contains friable volcanic ash.

DISPENSING EQUIPMENT AVAILABLE

See your DOLGE SERVICE MAN or write
for literature.

DOLGE
dependable
WESTPORT, CONNECTICUT

WHAT OTHERS ARE SAYING

Wage Stabilization

RARELY in our whole history have the American people been subjected to such a shameless and inexcusable filibuster against the national welfare as is now being conducted by the United Labor Policy Committee.

Under its direction the three labor members of the Wage Stabilization walked off their defense posts, followed by other labor representatives on the mobilization front. For eight weeks, the United Labor Policy Committee has made it clear that it would not permit labor representatives to return to the posts they abandoned on the board unless it could dictate the terms of their participation in the serious emergency which now faces the country.

The labor leaders' adamant insistence on creation of a Wage Stabilization Board with sweeping jurisdiction over every problem of employer-employee relationships is an unabashed effort to scuttle the Taft-Hartley Law.

It is a shocking effort by the labor bosses to use the national emergency to achieve by coercion what they could not gain when they took their case to the American people in their effort to repeal that law. The people of this country are fearful of deceptive tactics resulting in evasion of the letter and spirit of the laws of our land.

On March 14, representatives of the National Association of Manufacturers, the Chamber of Commerce of the United States and the Business Advisory Council submitted to the Director of Economic Stabilization a constructive proposal for re-establishment of the Wage Stabilization Board which had been wrecked by the desertion of the labor representatives.

Under that proposal, the reconstituted board would have been given authority to consider questions involving interpretation of its established policies. Since the board was established specifically at the will of Congress to develop and administer wage stabilization policy only, its considerations must, by law, be confined to handling questions arising over the meaning or application of established wage stabilization policies.

The proposal was offered in the public interest and was motivated by a patriotic desire to get on with the job of rebuilding our national defense and strengthening the economy. But the labor chiefs would have none of it—demanding that the board should have sweeping powers over all types of labor disputes whether wage stabilization was involved or not.

The plain facts of the matter are this: Here is brazen attempt to force compulsory arbitration by government as a substitute for the processes of genuine collective bargaining which are the expressed will and written policy of the American people as expressed by Congress. What the labor leaders want is to avoid wage stabilization and create a scheme which, whether calculated or not, would fuel the fires of inflation by increasing the inflationary pressures on prices.

No situation which cannot be dealt with adequately and equitably under the emergency provisions of the Taft-Hartley Law has yet developed or is it in prospect. The mere existence of such a board as the labor bosses demand would unquestionably encourage—rather than discourage—labor disputes and thus hamper sorely needed production.

During the period from Dec. 8, 1941, to Aug. 14, 1945, despite the existence of a disputes board, there were 14,371 work stoppages involving 6,744,000 workers and a direct loss of the equivalent of 36,300,000 man-days of work. In addition, millions of others were thrown out of work for lack of parts and materials produced in plants on strike.

Such a board would almost certainly be used by the labor unions to obtain concessions by government order on such matters as union security, seniority, disciplinary rules, jurisdictional questions and operating procedures. None of these have any relation to wage stabilization.

The board of directors of the National Association of Manufacturers has reaffirmed its conviction that a Wage Stabilization Board with power to settle disputes not arising out of efforts at wage stabilization would be a hammer blow at defense production, a deliberate evasion of the laws of the

land, and a tremendous contribution to ruinous inflation.

In my opinion, the American people will not submit to this obvious grab for unlawful power. The people of this country will not and should not submit to dictation from any group.—*William H. Ruffin, president of the National Association of Manufacturers, and president and treasurer of Erwin Mills, Inc., Durham, N. C.*

The Textile Strike

WHILE management and union chieftains dispute the "effectiveness" of the current textile union strike in several Southern states, there is no room for dispute over its definite and serious effect on two groups of people: the consumers and the workers.

The workers will lose in wages; if the strike is prolonged, and it will be unless the workers choose to return to their jobs, it would take them years to make up their loss, even if they won the wage increase the union is asking for.

And the public will lose, for the just-developing prospect of a price break in textiles will go glimmering while no cloth is produced and inventories are sold off.

It is unfortunate that the strike has developed just now. We believe wage differentials (those remaining) between Northern and Southern workers should be gradually wiped out and this has been the trend. But this strike, like others before it, has all the earmarks of a further development of tactics aimed at unionizing Southern mills, which have proven hard to crack. And whether anyone ever really gains from a strike is debatable.

The strike is unfortunate because many of the mills were working on Defense Department contracts and the Defense Department apparently is concerned because it acted to delay the walkout by about two weeks.

It is unfortunate because the textile market in recent days and weeks has shown some signs of declining. This might have resulted eventually in lower prices for the consumer.

It is unfortunate for the workers because we rather suspect that the mills are in better shape to stand a prolonged strike than are the workers, most of whom will be in need by the time

they have missed one or two pay days.

As against this, authoritative sources report that the textile industry has on hand large inventories of finished goods, or goods ready for finishing to suit the buyer. Unsold goods are a source of worry to any manufacturer. The inventories have resulted from continued full-scale operations, plus a slower market due to the general price level and a certain amount of buyer resistance.

If this is the case, and we believe it is, the mills can close their doors and

make money selling off their inventories.

Besides, the record of the last decade or two tends to show that the textile workers of this section gradually get what they want without striking.

T.W.U.A. President Emil Rieve, the same who walked out of the Government's mobilization hierarchy in pique, says from strike headquarters that, "The union is in position to stand a long strike." Perhaps it is, but the individual workers almost certainly are not.—*Greenville (S. C.) Piedmont.*

NON-FLUID OIL

TRADE MARK REGISTERED

Checks "Cam Spatters"

Ordinary lubricants cannot endure the centrifugal throwing action of loom cams which spatter oil on warps and woven goods. Highly adhesive NON-FLUID OIL stays where applied to prevent these oil spots and smears. 7 out of 10 mills put a stop to "seconds" and save money on lubricants and application costs by using NON-FLUID OIL which outlasts oil 3 to 5 times.

We are prepared to furnish mills with skilled engineering service. Write for Bulletin T20 TB and free testing sample of A-#00000 grade NON-FLUID OIL.

NEW YORK & NEW JERSEY LUBRICANT CO.

292 Madison Avenue, New York 17, N. Y. Works: Newark, N. J.

Southern District Manager: FALIS L. THOMASON, Charlotte, N. C.

WAREHOUSES: Atlanta, Ga.—Birmingham, Ala.—Charlotte, N. C.—Columbus, Ga.—Greensboro, N. C.—Greenville, S. C.—Chicago, Ill.—Detroit, Mich.—Providence, R. I.—St. Louis, Mo.

Don't you believe it! If anyone approaches you with products they swear to be exact imitations of NON-FLUID OIL, at a lower price, don't you believe it! The basic factors in all industrial production preclude paying a little and getting a lot . . . Remember, you only get what you pay for!

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called generic imitations of NON-FLUID OIL often prove dangerous and costly to use.

Southern Textile Assn. Convention



This year's S.T.A. convention will be held June 21-22-23 at Mayview Manor, Blowing Rock, N. C. Mill managers, superintendents, overseers and other operating executives, whether or not members of the Southern Textile Association at present, are urged to attend.



As of April 10, all rooms at Mayview Manor had been reserved for the convention week-end. However, an unlimited number of European plan double rooms is still available at Green Park Hotel, a very comfortable establishment on the golf course not far from Mayview. These double rooms at Green Park are \$8, \$10 and \$12 per day for two persons, and *reservation requests should be sent direct to the Green Park management accompanied by a one-day deposit.* The accompanying blank may be used for this purpose.

Since the Green Park dining room will not be in operation until later in the season, persons registered there may get meals at Mayview Manor (\$1.50 breakfast, \$2.50 luncheon, \$3.50 buffet supper Thursday night, and \$5 banquet Friday night—plus 3% sales tax and 10% gratuity) or at the several public restaurants in the business district of Blowing Rock.

Arrival should be scheduled for Thursday afternoon, since activity begins that evening with a buffet supper. The first business session will take place Friday morning; that afternoon there will be the annual golf tournament and bingo game, followed by the Associate Members Division reception and banquet that night. The convention will end Saturday morning with a final business session and election of new officers for 1951-52.

| Mrs. Helene Williams, Manager
| GREEN PARK HOTEL
| Blowing Rock, N. C.

| Please enter the following double room reservation
| in my name for the Southern Textile Association
| convention June 21-23:

| (Check one)

| \$ 8 per day (third floor)
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TEXTILE INDUSTRY SCHEDULE

— 1951 —

April 22-27—WET PROCESSING EXPOSITION, 71st Regiment Armory, New York City.

April 29-May 4—MATERIALS HANDLING EXPOSITION, International Amphitheatre, Chicago, Ill.

May 2—A.A.T.T., Builders Club, New York City.

May 5—SOUTHEASTERN SECTION, A.A.T.C.C., Atlanta, Ga.

May 7—PIEDMONT DIVISION, S.T.A., North Carolina Vocational Textile School, Belmont.

May 11-12—Industrial Journalism Institute, SOUTH ATLANTIC COUNCIL OF INDUSTRIAL EDITORS, Chapel Hill, N. C.

May 12—SOUTH CENTRAL SECTION, A.A.T.C.C., Hotel Patten, Chattanooga, Tenn.

May 16-18—Annual convention, COTTON MANUFACTURERS' ASSOCIATION OF GEORGIA, Sheraton Plaza and Princess Innena Hotels, Daytona Beach, Fla.

May 16-18—NORTH CAROLINA STATEWIDE INDUSTRIAL SAFETY CONFERENCE, Robert E. Lee Hotel, Winston-Salem.

May 17-19—Annual outing, CAROLINA YARN ASSOCIATION, Carolina Inn, Pinehurst, N. C.

May 17-19—Annual convention, COTTON MANUFACTURERS' ASSOCIATION OF SOUTH CAROLINA, The Cloister, Sea Island, Ga.

June 6—A.A.T.T., Builders Club, New York City.

June 8-9—Annual outing, SOUTHEASTERN SECTION, A.A.T.C.C., Radium Springs, Albany, Ga.

June 18-22—Annual meeting, AMERICAN SOCIETY FOR TESTING MATERIALS, Atlantic City, N. J.

June 21-23—Annual convention, SOUTHERN TEXTILE ASSOCIATION, Mayview Manor, Blowing Rock, N. C.

June 29-30—Summer outing, PIEDMONT SECTION, A.A.T.C.C., Ocean Forest Hotel, Myrtle Beach, S. C.

Sept. 8—SOUTHEASTERN SECTION, A.A.T.C.C., Columbus, Ga.

Sept. 12—A.A.T.T., Builders Club, New York City.

Sept. 20-21—Annual convention, SOUTH ATLANTIC COUNCIL OF INDUSTRIAL EDITORS, Asheville, N. C.

Sept. 22—PIEDMONT SECTION, A.A.T.C.C., Charlotte Hotel, Charlotte, N. C.

Oct. 3—A.A.T.T., Builders Club, New York City.

Oct. 4-5—Annual convention, CARDED YARN ASSOCIATION, Carolina Inn, Pinehurst, N. C.

Oct. 17-19—Annual national convention, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS & COLORISTS, Statler Hotel, New York City.

Oct. 18-19—Annual convention, NORTH CAROLINA COTTON MANUFACTURERS ASSOCIATION, Carolina Hotel, Pinehurst.

Nov. 7—A.A.T.T., Builders Club, New York City.

Nov. 8-9—Annual meeting, TEXTILE RESEARCH INSTITUTE, New York City.

Dec. 1—SOUTH CENTRAL SECTION, A.A.T.C.C., Hotel Patten, Chattanooga, Tenn.

Dec. 3—AMERICAN ASSOCIATION OF TEXTILE TECHNOLOGISTS, Builders Club, New York City.

Dec. 8—SOUTHEASTERN SECTION, A.A.T.C.C., LaGrange, Ga.

— 1952 —

March 3-7—Spring meeting and committee week, A.S.T.M., Cleveland, O.

June 23-27—Annual meeting, A.S.T.M., New York City.

June 26-28—Annual convention, S.T.A., Ocean Forest Hotel, Myrtle Beach, S. C.

Nov. 6-8—Annual national convention, A.A.T.C.C., Boston, Mass.

— 1953 —

Sept. 17-19—Annual national convention, A.A.T.C.C., Stevens Hotel, Chicago, Ill.

— 1954 —

April 26-May 1—AMERICAN TEXTILE MACHINERY EXHIBITION, Atlantic City (N. J.) Auditorium.

EDITORIALS

made his decision, has he? Now let us see him execute it." *It was accordingly never executed, and has remained to this day a blank piece of paper.*

Power assumed by judges in *Marbury v. Madison* was without precedent in any other country. It had never been dreamed that judges would assume governmental functions and negate the action been attempted only once in England, and then they very promptly of men who were entrusted with the law-making duties. It has hanged the chief justice (Tressilian) and exiled his associates.

If I were to quote to you the comments made by Thomas Jefferson upon some of these decisions, the remarks of Andrew Jackson, of Abraham Lincoln and of others upon the exercise of this usurped power, it would make your ears burn.

Justice Harlan well said, "When the American people come to the conclusion that the judiciary of this land is usurping to itself the functions of the legislative department of the government and by judicial construction only is declaring what should be the public policy of the United States, we will find trouble."

The New York State Court of Appeals, elected by the people, in *Lockner*'s case, affirmed the power of the state legislature to regulate bakeries. It was purely a matter of police regulation, and the federal court had no jurisdiction over the matter. *But they usurped it by the flexible terms of the Fourteenth Amendment, which means anything and everything that the judges see fit.*

Mr. Justice Holmes, who was one of the four dissenting judges in the *Lockner* case, in *Bank v. Haskell*, 219 U. S., 111, speaking for the court, thus finely defines the police power which is reserved to the states: "The police power extends to all the great public needs. It may be put forth in aid of what is sanctioned by usage, or held by the prevailing morality or strong and preponderant opinion to be greatly and immediately necessary to the public welfare." *This power belongs to the states and it was judicial usurpation when the United States Supreme Court overruled your statute.*

It may be interesting to note the origin of the doctrine of judicial supremacy. The doctrine is based upon the idea that a majority of the senators who are sworn to serve the Constitution may either viciously or ignorantly violate the Constitution in the passage of any act, and though a majority of the house may do the same thing, and though the President may also either viciously or negligently violate his oath of office by failing to veto an unconstitutional act, and a minority of the court may do the same, the five men who constitute the majority are infallible and will never do so.

Men of ability are not free from errors, nor from being influenced by love of power. However conscientious they may be, placing them on the bench does not change their nature nor the views which they held while at the bar.

When the men who wrote the United States Constitution at Philadelphia returned home, they were surprised to find that the people were not willing to ratify that document until certain amendments made it plain that the states had not surrendered to the Federal Government any powers other than those specifically stated.

It was not until the Bill of Rights was agreed upon that North Carolina ratified the Constitution and then only by a vote of 194 to 71.

The two sections of the Bill of Rights which were insisted upon most were:

ARTICLE IX

The enumeration in the Constitution of certain rights shall not be construed to deny or disparage others, retained by the people.

ARTICLE X

The powers not delegated to the United States by the Constitution, nor prohibited by it, to the states, are reserved to the states respectively or to the people.

North Carolina has never waived any of the rights reserved under those two sections of the Bill of Rights but federal judges are again attempting to establish "Government by Judges" by ordering the University of North Carolina to admit Negroes.

Judge J. J. Hayes, a North Carolina federal judge with



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Columbus, Ga.	Greenville, S. C.	Spartanburg, S. C.

an intimate knowledge of the law school in a Negro college at Durham, N. C., ruled that it was equal to the law school at the University of North Carolina, but when the case reached the Federal Court of Appeals at Richmond, Judge Maurice Soper and his two associates, intent upon forcing the University of North Carolina to admit Negroes, proceeded to set up "Government by Judges" and overruled Judge Hayes, who was closer to the scene and had a more intimate knowledge of the two law schools.

When Harry McMullan, attorney general of the sovereign state of North Carolina, was presenting his arguments before the Court of Appeals, Judge Maurice Soper, who was filling a political office created by an act of Congress, showed his contempt for North Carolina and its people by directing insulting and intemperate language toward him.

Judge Soper's language toward Attorney General McMullan and his decision in defiance of powers expressly reserved by North Carolina show the evils which have come upon this country through appointing politicians as "judges for life" and make clear that it is an evil which should receive the attention of the people.

The Constitution of North Carolina as adopted in 1868 and amended in 1875 says:

The children of the white race and the children of the colored race shall be taught in separate public schools.

Judge Soper and his associates cared nothing whatever for the Constitution of North Carolina but inflicted their own personal ideas upon the people of a sovereign state by usurping powers under the flexible terms of the Fourteenth Amendment, which as Chief Justice Walter Clark said above, *means anything and everything which a judge wishes it to mean*.

A special meeting of the board of trustees of the University of North Carolina was held on April 4 to approve a resolution admitting Negroes to graduate courses which are not provided by Negro colleges.

David Clark, John W. Clark, John H. Kerr, Jr., Wayland Spruill, Willie Lee Lumpkin and some others of the trustees made a strenuous fight against the adoption of the resolution but it was adopted by a vote of 61 to 14.

We are firmly convinced that among those who promoted the defeatist attitude by piously expressing the opinion that admission of Negroes was inevitable were some who actually favored the admission of Negroes.

They were, however, able to influence some to vote for what they asserted was the "inevitable" and there were others who, while opposed to the admission of Negroes, felt that they should not vote contrary to the expressed opinion of the new president, Gordon Gray.

Outstanding lawyers advise us that even though the United States Supreme Court rules that the University of North Carolina must admit Negroes, it has no power to enforce such a decree and Chief Justice Walter Clark, in his statement above, calls attention to the fact that the decision in the matter of the Yazoo claims "was never executed and remains to this day as a blank piece of paper."

We deplore the weak-kneed attitude of the board of trustees of the University of North Carolina and congratulate South Carolina, Georgia, Alabama, Mississippi and other Southern states in having men who are determined to stand up for the rights which they reserved when the Constitution of the United States was finally ratified.

Negro leaders openly state that the admission of Negroes to graduate schools is only the opening wedge and that they expect it to lead to the ultimate admission of Negroes to all public schools.

Bishop Gets His Pay

The following paragraphs are reprinted from recent issues of Boston, Mass., newspapers:

Mariano S. Bishop, cotton-rayon director of the T.W.U.A., pinch hit for Rieve and was the object of vocal cat calls before the meeting was called to order.

Workers arose repeatedly saying: "You get paid if we strike but we don't." There were other charges, many of which criticized Rieve for his recent firing of Baldanzi supporters. Yesterday Baldanzi declared open war on the union president following the firing of Sam Baron as Canadian director.

Tonight's announced vote is binding on 8,000 workers in seven mills. Their total weekly wages are \$422,400. The average weekly pay is \$52.80. Other smaller mills that would be expected to be affected by a strike would bring the weekly wage loss to the community of \$500,000.

Mutterings that today's balloting was rigged for a strike before it started, continued to be heard tonight, but apparently no one is in a position to disprove that the workers got an honest election. Union guards protected the voting and the counting and held possession of the ballots during a three-hour period when it was decided to close the polls for a period.

Yesterday, five New Bedford priests to whom the workers had appealed to intervene for a true secret ballot on the strike question, pleaded for an honest election. Tonight, one of them, the Rev. Hugh A. Gallagher, pastor of St. James Church and director of relief during the crippling 1928 strike, said:

"I don't understand the vote. Everybody said they didn't want a strike."

It was the method of balloting that was the principal complaint of New Bedford workers tonight. Particularly they complained that union leaders stood over their shoulders as they marked their ballots.

Instead of using the voting booths the mayor of this city offered the union earlier in the week, the workers were shown to rows of open tables to mark their ballots. They protested that union officials walked back and forth behind these tables as the ballots were read, considered and then marked.

Newsmen from this city, Providence, Fall River and Boston asked union officials to show them that the workers were enjoying a secret-ballot and that they were getting an honest count. This was flatly refused.

However, there were some odd occurrences. For instance, the ballots supposedly were counted at Moose Hall after all had been brought there from the polling places. But a group entering the hall with a ballot box from the Fisk Cord Mills said the shop had voted 420 to 142 for a strike. He was right. That was the announced count from Fisk.

Tonight the union's strategy committee was in session. Their plans had been delayed by refusal of the New Bedford cotton workers to call a strike by acclamation at a meeting Sunday. Instead, they had demanded today's "secret" ballot.

Textile Wages

It has been our feeling all along that this Spring's labor trouble in the textile industry is entirely the idea of those who lead the Textile Workers Union of America, C.I.O. We do not believe that the workers themselves wanted to strike.

It is our idea that the average worker in Southern textile plants is convinced that management is reasonable in its attitude toward pay rates. There is little point in reciting the many reasons why Southern textile management could not logically agree to the early-April demands of the union



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leaders. We do not think that, aside from the price and wage control elements which have been interjected into the issue, the following figures (*published by the United States Department of Labor*) have an important bearing on the situation.

WEEKLY EARNINGS
COTTON, SILK, SYNTHETIC FIBER MANUFACTURING

NORTH			
	Gross Average Weekly Earnings North	Consumers' Price Index	"Real" Average Weekly Earnings North
	Dollars	10/39=100	'35/'39=100
Oct. '39	\$16.90	100.0	\$16.90
" '40	18.14	107.3	18.10
" '41	22.62	133.8	20.70
" '42	26.43	168.2	23.89
" '43	30.73	181.8	24.70
" '44	32.65	193.2	25.81
" '45	33.32	197.2	25.85
" '46	40.07	237.1	27.00
" '47	44.79	265.0	27.34
" '48	42.04	248.8	24.22
" '49	48.62	287.7	28.86
" '50	55.94	331.0	32.00

SOUTH			
	Gross Average Weekly Earnings South	Consumers' Price Index	"Real" Average Weekly Earnings South
	Dollars	10/39=100	'35/'39=100
Oct. '39	\$13.83	100.0	\$13.83
" '40	14.61	105.6	14.58
" '41	19.04	137.7	17.42
" '42	22.21	180.6	18.66
" '43	23.26	168.2	22.40
" '44	26.27	189.9	22.50
" '45	27.09	195.9	22.02
" '46	34.64	250.5	23.34
" '47	38.02	274.9	23.21
" '48	41.48	299.9	23.89
" '49	45.30	327.5	26.86
" '50	51.25	370.6	29.32

Virginia Justice

One thing we admire about the Commonwealth of Virginia is that she, probably more than any other state, metes out punishment to those who commit serious crimes such as murder or rape.

Some of the very wealthy and some of the most influential citizens of Virginia have, in years past, found it impossible to avoid punishment when found guilty of those crimes.

About two years ago, a white housewife of Martinsville, Va., went to the Negro section there to secure some laundry which had been done for her.

Crossing a railroad embankment upon her return, she encountered a group of young Negro men and was set upon and raped by at least seven of them.

There was never any doubt about the guilt of the Negroes; in fact, each of them signed a confession but each tried to fasten the leadership blame upon one of the others of the group.

All seven of them were convicted of the serious crime which they had committed upon a defenseless woman and under the Virginia law the penalty was death.

Then began a long series of court appeals which twice reached both the Supreme Court of Virginia and twice reached the United States Supreme Court but the efforts to save the Negroes from the punishment which they deserved availed nothing.

Headed by a Walter White, a Harlem half-breed who came originally from Atlanta, Ga., large sums of money were raised but we have an idea that much of it stuck to the hands of those through whom it passed.

There never was any serious contention that any of the

seven Negroes were innocent because there had been witnesses and each of the Negroes not only admitted his guilt but testified against the others.

The appeals were based upon the claim that because they were Negroes they should not pay the penalty for their crimes.

On Feb. 3, 1951, four of the Negroes who raped the defenseless woman were electrocuted and on the following Monday the remaining three paid the supreme penalty.

Virginia again sustained her reputation for refusing to permit influence to prevent punishment for serious crimes.

Union Elections At Belmont

The C.I.O. won an election at the Perfection Spinning Co. at Belmont, N. C. The vote was:

For the mill	83
For the C.I.O.	130

The C.I.O. won an election at the National Yarn Mills.

For the mill	72
For the C.I.O.	149

Then they lost the following elections in Belmont:

Chronicle Mill	137
For the mill	137
For the C.I.O.	94

Imperial Mill	114
For the mill	114
For the C.I.O.	54

Crescent Spinning Co.	168
For the mill	168
For the C.I.O.	49

Piedmont Processing Co.	144
For the mill	144
For the C.I.O.	109

The result of a vote taken at the Sellers Mfg. Co. at Saxonahaw, N. C., on March 10 was as follows:

For the mill	344
For the C.I.O.	83

Taft Blasts Textile Labor Report

We have in several editorials commented upon the report on Southern textile workers as issued by the majority of the Senate Labor Committee, Senators Murray, Humphrey and Morse.

In a recent statement Senator Taft said:

The majority report could not be more one-sided if it had been written by the attorneys for the union which inspired the investigation.

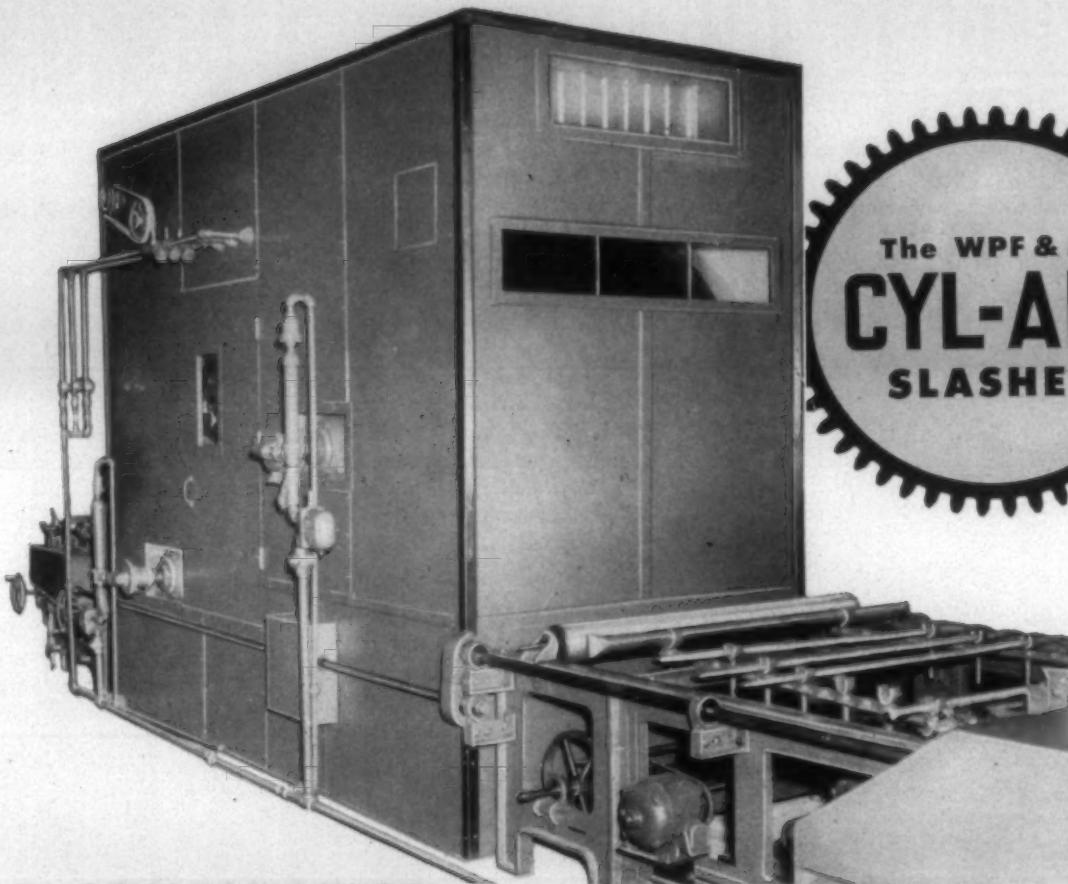
That is exactly what happened because the report was written and handed to the committee by C.I.O. attorneys.

The publication of the majority report was delayed considerably when it was learned that TEXTILE BULLETIN had managed to secure a copy of the original report but it was finally released in a modified form.

Senator Taft goes on to say in his criticism of the report:

The publication of this (majority) report constitutes an amazing and unjustified slur upon a great section of our country. No evidence was received by the committee which would indicate that the average Southern workman is not just as self-sufficient, self-reliant and independent as his Northern brother.

Apparently the majority of the committees have concluded that the C.I.O. Textile Workers Union cannot organize all the Southern textile industry unless Congress orders the workers to sign up with



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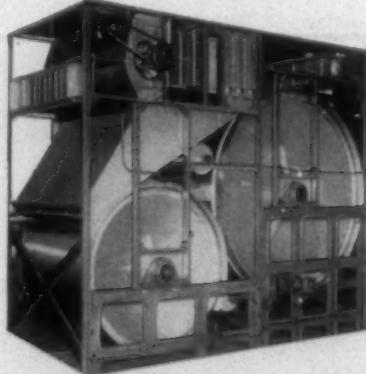
In the completely enclosed CYL-AIR Slasher Dryer, air is heated by three double-row steam coils, then circulated through the wet yarn and around the two cylinders by a triple unit centrifugal blower. A large percentage of the hot air is recirculated for better thermal efficiency.

The contact drying rate of the 5' and 7' cylinders of the CYL-AIR is greater than conventional type cylinders because of the insulated enclosure and the circulated hot air surrounding them. These welded,

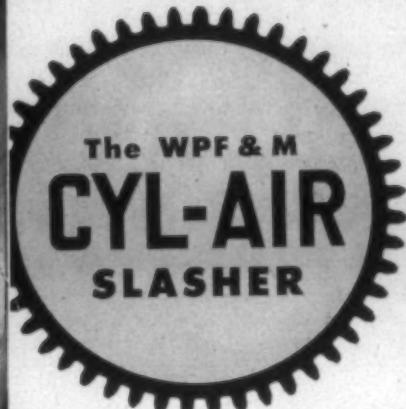
dished-head cylinders are made for steam pressures up to twenty-two pounds per square inch.

The CYL-AIR Slasher Dryer is designed for smooth operation and low maintenance cost. We will be glad to show you how the CYL-AIR can be easily adapted to your present slasher equipment.

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Model 50 Size Boxes

Standard Size Boxes

Size Kettles and Equipment



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WEST POINT, GEORGIA

it. Thus the committee would transform a law creating rights for workers to one imposing a duty upon workers, viz., "Join the C.I.O."

Senator Taft was joined in his statement by Senator Nixon of California.

We suggest that mills write Senator Taft for a copy of his minority report.

Bill Of Rights For Working Man

Labor union organizers are constantly condemning the Taft-Hartley Law, which took away from them unfair advantages over employers and the power to force workers to join unions and pay dues.

The Taft-Hartley Law can truthfully be called a "Bill of Rights for the Working Man."

William J. Walker, writing in *Militant Truth*, says that the Taft-Hartley legislation takes away none of the rights given to working men under the Wagner Act, but merely gives them additional rights, the more important of which are:

1. The right to get and to hold a job.
2. The right to express an opinion union matters or with regard to union leaders, or to refuse to join a strike without fear of losing his job.
3. The right to be free from union threats and violence.
4. The right to oust an unsatisfactory union.
5. The right to strike for every legitimate purpose that he has had under our laws for the last 100 years.
6. The right to be free from excessive and extortionate initiation fees.
7. The right to know how much money his union has, what is being paid to its officers, and in general how his money is being spent.
8. The right without fear of reprisal to support any candidate for public office.
9. The right to settle his own grievance with his employers.
10. The right to have his union free from communistic

control . . . or from the control of racketeers and extortioners.

11. The right to bargain in a craft union.

12. The right to have his union really represent the interests of the workers, instead of dealing under the table with the employer, as frequently happens.

13. The right to hear what his employer has to say on matters vital to his interests.

Your Tax Money

If all or most of the taxes paid to the Federal Government went for national defense the public would not complain, but the amount used to employ an ever-increasing army of federal employees ever increases.

The National Small Business Men's Association recently sent out a comparison of the peacetime spending of a few of the departments of our Federal Government. These figures cover actual expenditures for the fiscal years ending June 30, 1940, and June 30, 1950. Here they are:

Department of	1940	1950
Commerce	\$ 75,116,535	\$ 863,082,852
Department of Interior . . .	71,385,280	568,435,344
Department of Labor	18,576,698	257,043,997
Department of Justice	50,813,162	131,290,804
State Department	20,829,487	361,226,112
Independent Offices	3,269,254,403	9,033,499,925

Textile Events In Europe

For the benefit of those who expect to attend the International Textile Exposition at Lille, France, we list the following events:

April 28 to May 20—International Textile Exposition, Lille, France.

May 8 and 9—International Research Conference, Lille, France.

May 21 to 26—British Textile Research Conference, Brighton, England.

June 4 to 9—International Standards Conference, Bournemouth, England.

We are informed that it will be necessary to receive invitations in order to attend the two conferences in England.

Among those who expect to attend the International Textile Exposition are:

Hugh Brown, dean of School of Textiles at Clemson College.

Malcolm E. Campbell, dean of School of Textiles at N. C. State College.

David Clark, editor of *TEXTILE BULLETIN*, and Mrs. Clark.

W. J. Still, general manager, and Arthur B. Borden, treasurer, Borden Mills, Kingsport, Tenn.

W. B. Shuford, general superintendent, Shuford Mills, Hickory, N. C., and Granite Falls, N. C., Mrs. Shuford and daughter.

Oliver Landis, mill supply agent, Charlotte, N. C.

Raymond A. Sharpe, Crompton & Knowles Loom Works, Worcester, Mass.

Kent Swift, chairman of board, and J. Hugh Bolton, president, Whitin Machine Works, Whitinsville, Mass., and sons.

J. L. Truslow, vice-president, and R. M. Jones, research engineer, Saco-Lowell Shops, Biddeford, Me.



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THE SATURDAY EVENING POST

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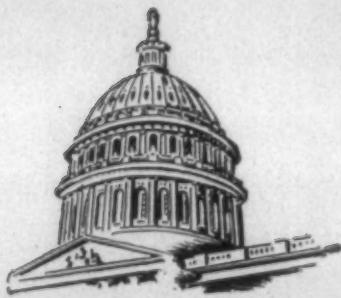
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WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

The stench of graft, corruption, dishonesty and tax waste in this administration grows apace, although some investigations are coming to an end. The most that any inquiry has done was to scratch the surface. Truman gives no evidence of realizing that his administration hereafter will probably be known as the most corrupt in the country's history. The condition arises in lack of leadership, low standards of integrity, and catering to "influence," whether that of fly-by-night peddlers or big union bosses.

Truth is that much of the Truman Administration is coming apart at the seams and falling to pieces. Only the strong hand of Wilson holds the mobilization effort together. Every one knows Truman is not going to run again, and the question is who can take his place.

Truman is showing signs of disappointment and discouragement; his former zest and will for leadership is missing. He's disgusted with some of his cabinet members, including Tobin, and with the squabbling around him. If Tobin goes, which is possible, Frank Graham is in line to succeed him as Secretary of Labor.

The sinister, ugly fact that has been made evident is that if you wish to do business with the government now, you need "influence." It's true right now in relation to some war contracts. And "influence" is to be had for pay, just like hiring a police court lawyer. If you are a small fry, you will need "influence" at all four points of the compass, and even then meet this administration's "brush-off" in every known form.

With the government bigger and more powerful than it has ever been, and more things centering on it, Truman has allowed the standards of integrity to sink to the lowest known point. The biggest "influence" peddlers have been the labor bosses, who have swaggered through government demanding whatever they wanted, and often taking it with Truman's tacit approval.

Union bosses in their recent Washington conference frankly made clear that their drive for more power in mobilization policy-making is essentially political. It's a move, they made evident, to more completely take over national government. Demands for changes in regional machinery for handling wage controls and manpower disputes are subordinate to aims for determinative policy-making in Washington.

Seizure of mobilization controls would enable the union leaders to extend their own power and compel workers on war contracts to join a union. While the civilian working force has

increased over 9,000,000 since 1945, the unions have gained only 333,000 new members.

Truman's own economists turned a hot blow torch on the labor bosses when they said in a report that wage escalator clauses are a built-in mechanism of inflation, and bound to raise prices. The union defense for them has been that they are a safeguard against inflation and higher prices.

New tax legislation this year is becoming increasingly doubtful, but a bill to raise several billions in new revenue will be brought into the House. Big tax collections already assure a balanced budget in June, and with reductions in governmental extravagance, it is not evident now that more taxes will be needed this year.

Cabinet members Brannan and Tobin are sadly learning that in their jobs they are just pawns for two grasping pressure groups. Farm groups are assailing Brannan for not getting more for them, and the labor bosses are lambasting Tobin for not doing more to support their demands on Defense Mobilizer Wilson.

Democrats in Congress fear to squelch the crime investigation, even if Senator Kefauver quits. The country appears more fully aroused over the revelations, including lax tax collections and big campaign gifts from gangsters, than has been generally believed.

Startling as are the revelations of "influence" peddling in R.F.C. loans, the Fulbright Committee has not turned up anything that violates a law. It is simply a revelation of a group of insiders, linked with a Truman aide in the White House, cashing in for huge sums in using influence on vacillating bureaucrats with easy consciences.

New federal taxes are not needed if the Truman regime cuts down waste and needless spending, says G.O.P. top member Dan Reed of the House Ways and Means Committee. Instead of a deficit this year, he says that a surplus of possibly \$3 billion can be realized on the taxes already being laid.

Tax collecting shenanigans in which tens of millions of dollars have escaped payment in tax frauds and widespread bribery of tax agents are being uncovered by a Senate Finance Sub-Committee. The evidence shows the bribery at its worst in New York City, where Truman refused a year ago to discharge a revenue collector against whom serious charges were made.

Speaker Rayburn is right when he says World War III is closer now than at any time since 1945. But MacArthur has been given full authority to use the Air Force and Navy against Red strongholds in Manchuria if the 3,000 Russian airplanes in the hands of Chinese strike in Korea.

Action of the Senate in committing the country to fight if western Europe is attacked makes virtually certain the enactment of universal military training.



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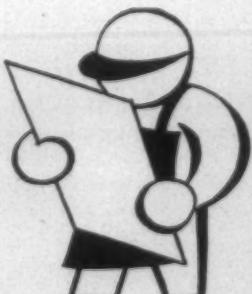
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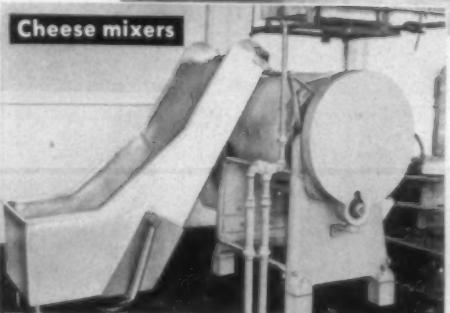
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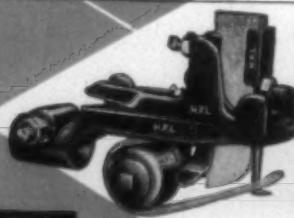


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textile bulletin

VOL. 77

APRIL, 1951

NO. 4

A.C.M.I. Has A 'Working' Convention

By JAMES T. McCADEN, JR., Editorial Director

If given a reasonably unrestricted opportunity, mills affiliated with the American Cotton Manufacturers Institute, now officially an organization serving producers of all types of textiles except knitgoods, will do the job demanded of them by national defense needs.

Meeting in annual convention at the Greenbrier Hotel at White Sulphur Springs, W. Va., March 29-31, members of the A.C.M.I. faced up to whatever might be the industry's role in a war or semi-war economy. In order for the institute to offer its services to a larger segment of the industry, its members voted a change in by-laws which makes eligible for membership any mill processing any type of yarn or woven fabric (spinning, weaving, braiding, dyeing, bleaching, printing, throwing, finishing and mercerizing). The former by-laws restricted membership to mills operating on the cotton systems of spinning.

At the closing session of the convention Charles C. Hertwig of Bibb Mfg. Co. at Macon, Ga., was elected president of the A.C.M.I., succeeding George P. Swift of Muscogee Mfg. Co., Columbus, Ga. William A. L. Sibley of Monarch Mills at Union, S. C., was elevated from the second vice-presidency to the first, and H. K. Hallett of Kendall Mills at Charlotte, N. C., was named second vice-president. Robert C. Jackson and F. Sadler Love, executive vice-president and secretary-treasurer, respectively, were subsequently re-elected by the A.C.M.I. board of directors.

Named directors for three-year terms expiring in 1954 were Malcolm G. Chace, Jr., of Berkshire Fine Spinning Associates at Providence, R. I.; A. G. Myers of Textiles, Inc., at Gastonia, N. C.; William H. Ruffin of Erwin Mills, Inc., Durham, N. C.; L. G. Hardman, Jr., of Harmony Grove Mills, Inc., Commerce, Ga.; Thomas M. Bancroft of Mount Vernon-Woodberry Mills, Baltimore, Md.; Herbert A. Burow of Bonham (Tex.) Cotton Mills; F. E. Grier of Abney Mills, Greenwood, S. C.; B. F. Hagood of Pickens (S. C.) Mills and Glenwood Mills, Easley, S. C. Elected to the board for a one-year term to fill a vacancy caused by the resignation of Wyllys H. Taylor was N. Barnard Murphy of Riegel Textile Corp., Trion, Ga. R. E. Henry, retired executive vice-president of the Duncane Mills Division of J. P. Stevens & Co., Inc., Greenville, S. C., was elected an honorary lifetime board member.

Directors remaining on the board for another year include: E. N. Brower, Rockfish-Mebane Yarns Mills, Inc., Hope Mills, N. C.; Clifford B. Hayes, Pacific Mills, Lyman, S. C.; Julian T. Hightower, Thomaston (Ga.) Mills; Frank W. Lyman, Fitchburg (Mass.) Yarn Co.; Julian Robertson, Erlanger Mills, Inc., Lexington, N. C.; James C. Self, Jr., Greenwood (S. C.) Mills; and Craig Smith, Avondale Mills, Sylacauga, Ala.

Board members whose terms expire in 1953 are W. H. Beattie, Woodside Mills, Greenville, S. C.; Robert H. Chapman, Riverdale and Inman Mills, Spartanburg, S. C.; A. B. Edge, Jr., Callaway Mills Co., LaGrange, Ga.; Gordon Harrower, Wauregan (Conn.) Mills, Inc.; Joe L. Lanier, West Point (Ga.) Mfg. Co.; Robert T. Stevens, J. P. Stevens & Co., Inc., New York City; Hearne Swink, Cannon Mills Co., Kannapolis, N. C.; and Arthur Winget, Efird Mfg. Co., Albemarle, N. C.

The newly-elected executive committee is composed of Messrs. Hertwig, Sibley, Hallett, Swift, Ruffin, Harrower, Lanier, Stevens, Swink, and Ellison S. McKissick of Alice Mfg. Co., Easley, S. C.

President Swift was suffering from laryngitis during the convention, but the forcefulness of his report to the membership at the first business session Thursday afternoon was in no way reduced when he asked Mr. Sibley to read the message for him. Mr. Swift began by stating that it would be a "working" convention and expressed the hope that those present would "find something here that will enable you to do your job more efficiently, that will help you to make your maximum individual contribution to national security."

No man can say at this time whether or not we are to be plunged into the horrors of a complete and total war, but we do know that for the troops in Korea that war is already a reality. Our task—the task of all of us—is to produce the goods necessary to win the limited war in which we are now engaged and to insure our victory in any future war. During the years since World War II, the textile industry has replaced much of its worn-out equipment and has streamlined its activities. There are no more patriotic people in the world than the hundreds of thousands of people who man the looms, the spinning frames and the other equipment in the textile industry, and it is my belief that their patriotic response will be of the same high quality that it was in 1942.

For textile management I believe I can voice the pledge that we will exert every effort to meet the country's military needs and its essential civilian needs. It must be our objective that no American soldier, seaman or airman shall go into battle with insufficient equipment because of any negligence on our part.

In order that our country may meet this third threat in less than 35 years, it must have a sound economy and a high productive rate. It has been pointed out in other occasions, that to win the Battle of Korea and to lose the Battle of Inflation, might mean the ultimate defeat for a free America.

To fight this battle, we have thrown into action a system of controls, under the command of the Office of Defense Mobilization. One arm of this command is the Defense Production Administration; the other arm is the Economic Stabilization Agency. Under the Defense Production Administration, which has many sub-divisions, controls have been set up governing the use of scarce raw materials, a system of priority extensions has been established in connection with defense orders; stockpiling of strategic materials is being expanded; building operations have been restricted, and consumption credit has been tightened. Under the Economic Stabilization Agency is the Wage Stabilization Board, which has not yet

functioned with notable success, and the Office of Price Stabilization, the new counterpart of the old O.P.A.

The first act of O.P.S. which directly affected our industry was a knock-out punch which stabilized us in a horizontal position for many weeks. The Ceiling Price Regulation of Jan. 25 closed the cotton futures exchanges, stagnated the spot markets, and virtually stopped the sales of cotton goods. For an industry which prices and sells its products from three to six months in advance of delivery, it is hard to see how a delivery period can logically be used as a reference standard for price-making. It is not only wrong logically, but becomes wholly unreasonable when the long-time interval between sales and deliveries is filled with rapidly rising material and labor costs. Even if rising costs had not occurred in such degree as to make our first ceiling prices unrealistic, the transaction of new business in any considerable volume would still have been impossible.

On Jan. 26, the industry was already sold through the second quarter for the most part, and for some lines well into the third quarter. Only to the degree of these sales was the industry covered on its cotton requirements. Any important new business would require the purchase of more cotton or the fixing of prices on cotton already contracted for. But the machinery of cotton marketing was paralyzed. Very little spot cotton could be bought, no prices could be fixed on cotton previously contracted for and no hedging of any kind could be done either by mills or shippers.

From time to time additional changes will be needed in price schedules, in material allocations and in D.O. priority extensions.

With all the earnestness at my command, I wish to urge those charged with these responsibilities, not to make decisions which will upset our economy and throw roadblocks in the way of production. It seems to me in this hour of need, the path of production should be smoothed rather than made more difficult.

This country has demonstrated that it can out-produce any other country in the world and, in so doing, has become strong and prosperous, with the greatest freedom and highest standard of living ever known. Let's keep this thought ever before us and not so regiment and straitjacket our economy that in the end our standard of living will be lowered and our freedom jeopardized by bureaucratic controls.

The textile industry attained a new element of prestige this year when one of its leaders, William H. Ruffin, was elected president of the National Association of Manufacturers. Mr. Ruffin felt it necessary to step out of the line of succession in the American Cotton Manufacturers Institute in order to take on the job of leading the N.A.M. Those who heard him at White Sulphur had a chance to reaffirm their conviction that the textile industry had furnished a capable emissary for the nation's manufacturers.

For three months it has been my privilege to travel many thousands of miles into the Middle West, to the West Coast, the Southwest, and the Deep South. These three months have been the most

stimulating experience of my life. I have seen with my own eyes the stirring of the American conscience. I have heard with my own ears the rumbling of a great resolve, a resolve that, regardless of political lines, we shall return to the basic principles which made this glorious country of ours great and strong and the only principles which can keep us free.

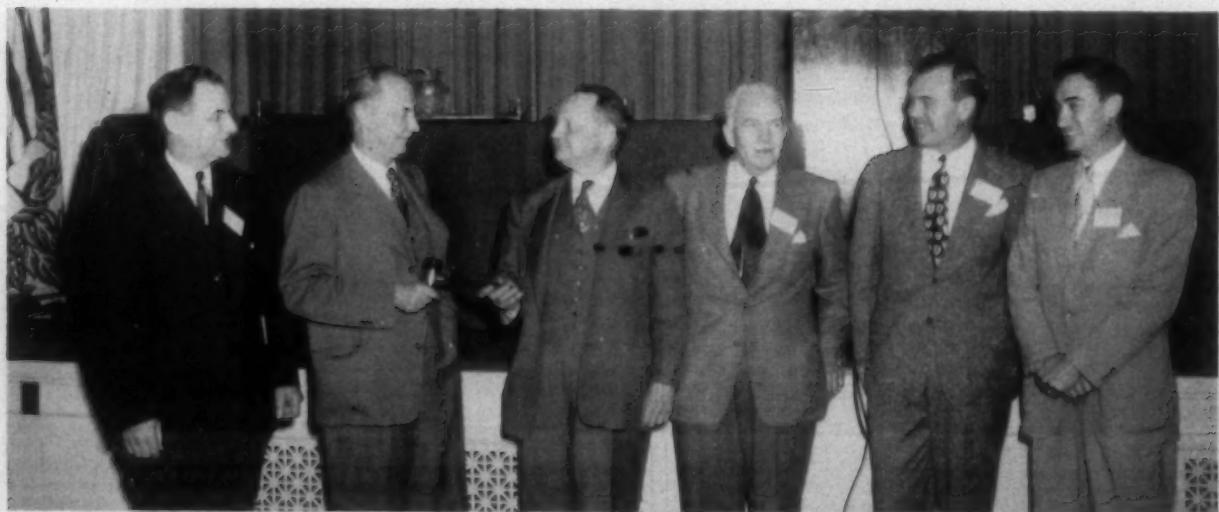
Today, N.A.M. is pledged to all-out production for national defense—and for war, if that becomes necessary to preserve our liberty—and at the same time production to maintain the highest standards of civilian living possible in a national emergency; to an all-out fight against inflation including a pay-as-we-go policy; tighter curbs on consumer credit and the most rigid economy in government spending, local, state and national, and finally, N.A.M. is in an all-out fight to cut the ground from under the creeping socialism which has been making progress, slow but sure, in this country in the last few years.

The defense of our nation is not a temporary or superficial job. The defense era into which we have been plunged may keep us on guard for years—even for the better part of a generation. This is a time when our chance either to maintain peace or to ensure victory over Red aggression hinge on stimulating America's productive power to a completely new level. It must be obvious then that direct controls is the direct opposite of what we hope to—what we must—achieve. The long-term effect of strait-jacket controls on America's productive genius and on the American spirit is an ugly thing to contemplate. Russia could ask nothing better than that we regiment away our manifest advantages, and handicap ourselves down to her level with a heavy pattern of bureaucratic control. That's the story of Russia's satellites. That's the history of bureaucratic controls and other tools of creeping socialism in too many other once-great countries.

It is argued by some that direct controls are anti-inflationary. No real American will deny that in a genuine national emergency every citizen must be prepared to sacrifice *temporarily* some measure of his individual freedom in order that the full impact of the national effort toward victory shall be mustered. But that does not mean and no real American will permit it to mean that an emergency real or political can be used to achieve so-called "social gains" or "welfare objectives" which could not be attained in normal times or through normal legislative processes. There isn't a man in this room or a recognized economist in this country or a realist in government who does not agree that controls touch only the symptoms not the causes of inflation.

Our individual American freedom rests today as it has always upon—individual responsibility—individual integrity—individual effort—individual courage—individual thrift—and—above all—individual religious faith. We've got to get that "individual" concept of our personal citizenship obligations out of the moth balls. And that goes for every man and woman in government, in labor, in management, on the farms, and in the homes of this country.

We've got to get back to that concept because just so long as we sit idly by with our public morals and our individual integrity—as citizens—in those moth balls we are easy prey for our domestic socialists. We are easy prey because our national character can be



Here Retiring A.C.M.I. President George Swift (second from left) turns over the association's gavel to 1951-52 President Charles C. Hertwig. With them from left to right are: W. A. L. Sibley, advanced from second to first vice-president; H. K. Hallett, the new second vice-president; Robert C. Jackson, executive vice-president; and F. Sadler Love, secretary-treasurer.

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destroyed while our backs are turned. "Well!", you say, "but what can I do about it? I'm just one person." There isn't a man in this room who can't do something about it. You are the employers of many people. You are leaders—in one way or another—in your communities. Suppose you and I started out to remind our friends and neighbors—our suppliers and our customers—and every soul we come in contact with—that it was not hundreds of thousands of plants, factories, stores and farms that built the American character. It was, on the other hand, the American character—the American individual spirit that made us the greatest, most powerful and most prosperous nation on earth. That spirit—that intangible something disowned from the very beginning that all material blessings must flow from the throne.

It rejected as foolish and dangerous the idea of "something for nothing." It rebelled against taxation to make the taxpayer more and more subservient upon the tax collector. It was the spirit that by moving a man to vote on every possible occasion and to take part in his political party councils—it was that spirit that enabled him and made him proud to be a free American citizen. That's the spirit we need in America today. It can be rekindled—and you and I and other leaders can be the sparks—we must be—because in that spirit is America's time-tested and unconquerable *Inner Strength*.

David Ginsburg, a member of the Washington law firm of Ginsburg and Brown and a former counsel for O.P.A., got from his address what might be described in hackneyed fashion as "a mixed reaction." His audience was impressed with his delivery, but there definitely were questions as to Mr. Ginsburg's explanation of "The Strategy of Price Control." Mr. Ginsburg presented nine points which, he felt, could be put into effect immediately as a check against inflation:

(1) *Industrial Price Stabilization*: Dollars and cents ceilings on a 1946-1949 profit base should replace the present general ceiling.

(2) *Farm Price Stabilization*: Food and fiber prices can and should be stabilized within the framework of the price support program. Limited farm subsidies may be necessary, as in the case of minerals and metals, to protect high cost processors (especially in the case of meats), to stimulate production and to insure parity income to farmers. The automatic escalator provisions of the parity formula may have to be re-examined.

(3) *Wage Stabilization*: No wage increases should be allowed which break through price ceilings, although inequities, overtime, productivity increases and certain fringe benefits should be recognized. Most important to labor will be the stabilization of living costs; until this is done cost-of-living escalator clauses are bound to remain a troublesome problem.

(4) *Rent Stabilization*: A specific formula is required which indicates how rent levels may be set within the framework of a broader stabilization program.

(5) *Higher Taxes*: Pay-as-you-go taxes are the only effective long run answer to inflation. Every effort should be made to levy at least an additional \$10 billion of taxes by Midsummer or early Fall of this year.

(6) *Increased Savings*: As part of a firmly backed and broadly



On call at the official A.C.M.I. registration desk were (left to right) Robert M. Bourdeaux, Jr., field representative, Miss Leona Bell and Miss Ruby Huntley.

supported hold-the-line program it should become possible to increase the volume of savings by providing concrete reassurances regarding price stability and the future of the dollar.

(7) *Strengthened Credit Controls*: Federal Reserve Board credit policies can be tightened and will have to be tightened.

(8) *Reduced Government Spending*: Inflationary pressures are in part the result of increased government spending and will be reduced by diminished government spending. To be effective in this area close co-operation will be required between the executive departments and Congress, as the President himself has stated.

(9) *Closer Co-ordination Between Production and Price Control Agencies*: This is an indispensable requirement of any general stabilization program. Each set of controls complements and supports the other and cannot be fully effective without the other. Effective co-ordination was lacking last time between O.P.A. and W.P.B.; we should not allow the same situation to develop again between O.P.S. and the production agencies under Mr. Wilson's O.D.M.—D.P.A. and N.P.A. An essential objective of price stability is to maximize production; maximum production cannot be achieved without price stability.

In the days just ahead Mr. DiSalle faces two great dangers: *First*, the traditional alliance between business and labor against the price controller which almost always develops in periods of inflation; in return for labor's support for price increases, management offers to support wage increases; *second*, the even more evident risk of destroying the control legislation by particular commodity exemptions.

The only universal appeal that can be made is to self-interest. We are all in this boat together—and the group or the industry that scuttles it will sink with the rest of us. There would probably be some survivors; there almost always are in shipwrecks. The survivors might even profit from the salvage. But it would be salvage they'd have to deal with—not a free country.

Three A.C.M.I. committee reports, an address by United States Senator Willis Robertson of Virginia on "Current Washington Trends," along with Executive Vice-President Robert C. Jackson's report to the membership made up the Friday morning program.

Foreign competition represents a dire threat to the American cotton textile industry, and although this situation currently may be less noticeable, its presence is still overhanging the industry, declared Gordon Harrower of Wauregan (Conn.) Mills, Inc., speaking as chairman of the A.C.M.I. foreign trade committee. Mr. Harrower urged the membership as a whole to study the subject, and asked that any samples of foreign textiles which undersell American products be sent to the committee. Cloth or garments, together with the price, either wholesale or retail, become powerful evidence in the hands of an appropriate commission, especially if in addition domestic products which are being undersold can also be submitted.

Government agencies have not availed themselves of the full co-operation offered by the cotton textile industry during the present emergency, it was brought out in a report of the textile mobilization committee of the A.C.M.I. The committee headed by Charles A. Cannon of Cannon Mills Co., Kannapolis, N. C., also noted it had requested the industry be omitted from the manufacturers' price order. Ellison S. McKissick of Alice Mfg. Co., Easley, S. C., and first president of the A.C.M.I., read the report in the absence of Mr. Cannon, who was unable to attend the convention because of illness. Despite the fact that under the Defense Production Act, Section 402, provisions have been made to protect bona fide contracts on future delivery materials, the Office of Price Stabilization has completely ignored this stipulation, and the industry has no protection on contracts made prior to the issuance of the price regulation, the report stated. Touching on possible future legislation, the report stated: "The committee, in thinking of any new legislation which might be enacted on prices and wage controls, is preparing

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Speakers, in the order of their appearance at the White Sulphur Springs convention of the American Cotton Manufacturers Institute, were left to right, top to bottom: George P. Swift, 1950-51 president of the A.C.M.I.; William H. Rufin, president of the National Association of Manufacturers; David Ginsburg, senior partner in the law firm of Ginsburg & Brown, Washington, D. C.; F. Sadler Love, secretary-treasurer of the A.C.M.I.; Gordon Harrower, chairman of the A.C.M.I. foreign trade committee; Harvey W. Moore, chairman of the legislative committee; Senator Willis Robertson; A.C.M.I. Executive Vice-President Robert C. Jackson; Ellison S. McKissick, association past president who delivered the mobilization report for Charles A. Cannon; W. A. L. Sibley, who presided at the final business session and also substituted for President Swift at the first session; A. Henry Thurston, acting director of the National Production Authority's textile division; Wyllys H. Taylor, chief of the N.P.A. cotton section; Maj.-Gen. Herman Feldman, Army quartermaster general; R. Dave Hall, who presented the resolution committee's report; and W. N. Banks, who delivered the nominating committee report. Picture at lower right shows Mr. Hertwig presenting a watch, which was a gift of appreciation from the A.C.M.I. membership, to Mr. Swift.

to ask Congress to spell out more explicitly and define the necessary protection needed by the textile industry to produce, sell and market its goods, which are so vital to civilian and military use in time of emergency."

A report of the legislative committee was presented by Harvey W. Moore of Brown Mfg. Co., Concord, N. C., and the traffic committee, headed by Marshall C. Stone of Pacolet (S. C.) Mfg. Co., distributed its annual report in booklet form.

Senator Robertson said, in part:

I would emphasize to you as business men—that we have the duty of proving not only the degree of freedom and self-government with which individual members of society may be entrusted, but also the degree of freedom which private enterprise can be given and should be given in the interests of society as a whole.

There is one theory, exemplified in totalitarian states, that the welfare of society demands socialization of wealth or at least the tools of production. The opposite theory, and the one we hold, is that the welfare of society is so firmly tied to the welfare of the individual citizen that the best interests of all demand freedom for each one to make all the material progress of which he is capable, provided only that he does not violate the rules of fair play.

The methods, the objectives and the conditions necessary for the functioning of political freedom depend in their essence upon economic freedom. To recognize that the present era contains dangers which can jeopardize the framework of a free society is to realize that, in fact, there can be no genuine political freedom which is not sustained and nourished by the strength, the flexibility, and most important—the legal institutions and practices of an economy of free, private, competitive enterprise.

The whole history of the last two centuries demonstrates that where competition is stifled or suppressed by monopoly or governments, where the right to choose a trade or profession, or to move from one field of endeavor to another is nullified, the loss of political liberties becomes an immediate threat, and in time most probably an inescapable consequence.

In the stark contrast between the experiences of this country and much of the rest of the world it is sharply apparent that many of the peoples who have lost their liberties already, or are struggling against odds to retain them, have been misled into a fateful error—the belief that it is possible to maintain political democracy and representative government in full vigor while yielding freedom of enterprise, and with it the power of control over their economic destinies. It is not possible for this to be done. Political and economic freedom are root and branch of the same tree.

In the current crisis we must be true to those guiding principles and although we recognize the necessity for such measures as universal military training, a tax program that will hurt, controls over credit and production and prices and wages that impinge upon individual freedom, we must firmly resolve that they shall not continue longer than is absolutely necessary. We must be everlastingly alert to prevent seizure of these temporary expedients as a basis for permanent changes that will impair personal liberty and private enterprise.

By offering material as well as moral support to the people of other nations who share our philosophy and would like to share its benefit, we shall not only retain them as effective allies, but we may also project a ray of hope through the iron curtain to the millions of oppressed people there who also yearn, with slight hope, for those rights of life, liberty and the pursuit of happiness which we too often have taken for granted.

"We are engaged in a program of preparedness," said Mr. Jackson, "and preparedness means a program of increasing strength. It denotes an enlargement of power; an increase of productive capacity; an accumulation of reserves; a formulation of plans and procedures which will enable us to meet most effectively any catastrophe with a maximum of efficiency and a minimum of waste."

Such a program has no room for the negative; it must concentrate on things that are positive. When war actually comes there is little opportunity to expand and to enlarge, and any such action comes very hard. But in a period of preparation, such as we are engaged in at this time, it is our first and supreme duty to build, to enlarge,

to strengthen, and no program of control should have any other purpose.

Those who believe that the whole economic machinery of our country should be strait-jacketed immediately seem to assume that when an emergency comes, and we need to maximize production, we should discard the techniques by which we achieved our productive proficiency and substitute, instead, the techniques of the "control economy."

In February, the cotton industry processed at the daily rate of 45,487 bales of raw cotton. This rate has been surpassed in previous history only twice—in April and May, 1942, and then by a margin of only a few hundred bales.

In a recent statement to the press George Swift commented as follows: "To understand the full import of February production, it should be noted that on an annual basis of 255 standard working days, which excludes legal holidays, it would amount to 11,590,000 bales. If realized, this would exceed the 1942 all-time record. We do not expect to reach that figure, since seven months of the season have passed; but we have demonstrated the physical possibility of reaching it during the coming 12 months, if such production should be urgently needed and if the manpower and cotton are available."

Here, we have a demonstration of the production know-how of the cotton manufacturing industry, and there is no reason to believe that the limit has yet been reached. Here also we have a clear example of the force that this industry can generate not only to supply the needs for its products, but also to supply the most certain assurance possible that these products will be available at fair prices.

Practically every person present has believed that the industry could and would produce at levels heretofore unequalled if called upon to do so. Well, it isn't surmise any longer—now we know. But we know too that this increased production has been achieved by expensive extra-shift operations, by week-end overtime operations, and we know that additional increases must be achieved in the same manner.

For the sake of our preparedness program—for the sake of the whole civilian population of this country which depends upon cotton goods—it is absolutely essential that nothing be done to put the brakes on this productive machine. It would be tragic indeed if in its zealous effort to achieve a fractional decrease in the cost of living our government would, at the same time, paralyze the incentive for this industry to do its best, because under such circumstances any price reduction achieved would be temporary, with unfortunate repercussions to come.

We cannot hope to achieve the production which is necessary for military preparedness and economic stability if we are forced to do battle at the same time on a second front—a battle for men's minds—a war of ideas and ideals—a fight between forwarding the concept of man as a free and responsible individual and man as the docile and regimented dependent of an all-powerful government.

The final session Saturday presented, in addition to passage of resolutions and voting on new A.C.M.I. officers, a variety of information about N.P.A., O.P.S. and military requirements for textiles.

Military requirements of duck are too high to continue without resorting to allocations, it was brought out by A. Henry Thurston, acting director of the textile division of the National Production Authority. He explained the set-



W. A. L. Sibley introduces the three Office of Price Stabilization forum participants. Left to right, seated: Harold D. Cohen, division counsel for the consumer soft goods division; William H. Brayer, chief of the textile branch's cotton section; and Charles W. Carvin, chief of the textile branch.

up of the N.P.A., and stressed that the primary function was to see that the services were supplied as well as meeting essential civilian needs. The sailing may not always be so smooth as it currently appears, warned Mr. Thurston. N.P.A., like the American Cotton Manufacturers Institute, is faced with the same problem, that of getting set up efficiently in extremely short notice. "It is essentially an operating agency and in building hastily there must be some mistakes," he said, adding that the agency would quickly correct any mistakes that were brought to its attention. Mr. Thurston promised there would always be free and full consultation with industry advisory committees and that full consideration would be given to recommendations given the division.

Wyllis H. Taylor, chief of the cotton section in the Textile Division of N.P.A., and formerly president of Newnan (Ga.) Cotton Mills, stressed that there was a sincere desire on the part of N.P.A. to co-operate with industry even if at times they must differ with suggestions proposed by the latter. He lauded the set-up of the industry advisory committees, and cited the industry's record in the past war, also expressing the viewpoint that if the industry again faced an all-out war program it would not fail to serve now or in the future.

According to Maj.-Gen. Herman Feldman, who as the Army's quartermaster general spoke on "Quartermaster Procurement Problems in the Textile Field," the procurement of the principal cotton fabrics for the military establishment, excepting duck and webbing, should not pose any serious production difficulty.

This is due to the fact that many of the carded military fabrics have civilian counterparts. With regard to combed fabrics, a problem arises because your mill equipment is intended to turn out attractive, less durable civilian fabrics and in many cases is not intended to make the fabrics which have been proved by test to be most suitable for the soldier. Quartermaster shortages in fine combed goods are very serious. Take the case of the five-ounce, wind-resistant twill. We went out for something over 11 million yards for the period January to June, but got offers on only a little more than half the amount and this for delivery over a longer period—January through December.

To make it easier for our mills to fill requirements in this type of cloth, we have changed our requirements to permit 50s two-ply filling yarn instead of 80s two-ply formerly used. This will also make faster weaving possible since we have decreased the required picks per inch from 90 to 83.

All of the wind-resistant cloths compose a group which we know are difficult for you to make but we hope that your organization and the Army can work together to spread the load. This will place



Welsford Bishopric, treasurer of Spray (N. C.) Cotton Mills, inspects fabrics and the 25 most critical supply items made from such fabrics which the Quartermaster Corps had on display in the Greenbrier Hotel.

a minimum hardship on any one mill capable of making the desired fabric while still giving the soldier on the battlefield the garments he should have.

It is again evident that the peacetime production of cotton duck, amounting to about 220 million square yards a year, is not sufficient to meet wartime requirements nor the requirements of the present accelerated military program. The great proportion of peacetime duck production is of non-military types used mostly for industrial purposes. It is essential, therefore, that large-scale conversion be effected of looms engaged in civilian production of rugs, carpets, upholstery, drapery and pile fabrics. To determine the industry potential that would be available through conversion of looms, Quartermaster Association committees were organized and consulted. Meetings and consultations with these groups and others have indicated that light ducks, that is 8.25 ounce, 12.29 ounce, and No. 10, are not adaptable for production on converted carpet looms. Therefore, the lighter looms of other categories, namely, drapery, upholstery and pile types will be required. Carpet looms, however, are adaptable for the heavier types of numbered ducks, the lightest of which is the No. 8.

Since the conversion of looms will not provide enough capacity, substitutions are also required. This is not only due to lack of sufficient convertible looms, but also because of the shortage of twister spindles needed to produce plied yarn for specification types of duck. As a remedy, substitutions for both the 8.25 ounce and the 12.29 ounce duck have been authorized—one substitute for the former, and three substitutes for the latter.

As was done in World War II, in addition to conversion and substitutions, other looms must be brought into duck production. Looms such as those presently used in production of denims, heavy sheeting, ticking, drills, twills and other similar types of fabrics would be utilized. Fabrics produced on such looms may well find effective use after treatment with weather-resistant formula.

The difficulties which we now face in meeting textile requirements should provide a challenge and a stimulus to industry in finding means for solving them. I believe we should develop fabrics which will do the best possible job for each particular use. Instead of taking a cotton or wool textile, merely because it is cotton or wool, let us determine how the best fabric can be made for a particular purpose, based on the functional requirements for that purpose. In this way we may wind up by using a cotton fabric, a wool fabric, a synthetic fabric, or a blend of any two or all of them.

In cases where there is a genuine necessity to expand plant equipment in order to meet military requirements, recourse may be had by the manufacturer to the necessity certificate. The necessity certificate provides a method whereby additional facilities of machinery added by the manufacturer may be depreciated or amortized for tax purposes within five years up to the amounts so authorized.

The Defense Production Administration has the authority to grant necessity certificates. An application for a certificate is generally filed with the D.P.A. and they forward it to the National Production Authority of the Department of Commerce. The National Production Authority makes a survey of facilities throughout the country to determine whether existing facilities are adequate to meet defense needs for the particular item.

I assume that you are familiar with the priority regulations issued by the National Production Authority. All Quartermaster Corps contracts carry a D.O. rating which can be extended to obtain parts and materials needed to produce the end items purchased on our prime contracts. Additional assistance is available to contractors and subcontractors with respect to obtaining priorities for machinery and equipment needed to produce on the supply contract. Applications for priority assistance for production equipment should be forwarded to the contracting officer with whom you are dealing. If Quartermaster Corps procurement will be slowed down or handicapped by the lack of such equipment in your plant, he recommends to my office that assistance be granted, through the issuance of a D.O.-98 rating. Where justified, my office initiates action which may assure a D.O.-98 rating being assigned.

An instructive forum on price control for the textile industry was provided by officials of the Office of Price Stabilization—Charles W. Carvin, chief of the textile branch; Harold D. Cohen, division counsel for the consumer soft goods division; and William H. Brayer, chief of the cotton section. Mr. Carvin noted that in the short span of two months since the general price freeze was imposed, the agency had done a tremendous job. He stated it was a

dramatic step to have the freeze slapped on all industry and cut across contracts, but one which held no alternatives, and that industry faces a challenge in helping the O.P.S. set up workable regulations. Mr. Carvin described his own position, as a man coming from business with a natural resentment toward having his operations regulated, and that he recognizes that in order to manufacture a man must have an incentive and a profit. The pricing problem is a gigantic one, he said, and is a moving target to aim at and hit. The agency, he emphasized, is still seeking more capable men from industry as consultants, and he urged that more experienced textile executives volunteer their services.

Mr. Cohen also declared that one of the best weapons to fight inflation was to increase production, but it is not the only weapon. Times and circumstances are different now than when O.P.A. was set up and the O.P.S. must use new approaches and means toward achieving stability, he declared. He also emphasized that the agency was not attempting to act arbitrarily but was seeking the help and enlightenment from the industry, at the same time urging those with any problems to inform Mr. Brayer or those in charge. Citing reasons for the slowness in progress on specific orders, he noted that the agency was understaffed, lacking economists, stenographers and other help; that orders once prepared must go through channels, so that they are legal and readable and that in government, unlike business, each regulation requires the scrutiny, approval, and signature of seven to ten different officials who are responsible for specific phases of the price act. Lack of necessary data from the advisory groups and the constant interruptions such as tak-

ing care of the military procurement, also delay operations despite long hours of work each day.

Mr. Brayer brought to the meeting a clear, concise report of the cotton section's functions, which was warmly received. His background of more than 35 years of experience with the cotton textile industry, coupled with a willingness to serve the government received the praise of those present. In his report, Mr. Brayer pointed out that although the O.P.S. hesitatingly issued the raw cotton order, it had given the agency an anchor on which to build future ceiling regulations for the cotton textile industry. The cotton textile industry, unlike other sections of the textile trade such as wool and silk, has a basis for operation, whereas the lack of firm wool prices leaves many more difficult pricing problems to overcome for the wool textile section of O.P.S. Despite many adverse criticisms, the raw cotton order is working fairly well, he said, and will need revisions.

Among resolutions passed at the final session was one urging that priority assistance be made available to the textile machinery industry to enable it to obtain sufficient materials to produce new machinery as well as maintenance, repair and operating supplies for domestic use.

The convention was concluded with presentation of the traditional and inimitably-worded nominating committee report by W. N. Banks, president of Grantville (Ga.) Mills. Upon Mr. Hertwig's formal election to the presidency of the American Cotton Manufacturers Institute, he was brought to the platform, and in turn presented an inscribed watch to Retiring President Swift on behalf of the association membership.

textile bulletin and Dave Clark

Receive Additional Congratulations

The writer is enjoying your March, 1951, TEXTILE BULLETIN. That picture on Page 123 of the young fellow with arms folded, black bow tie and straw hat is quite different from the pictures of the older wheelhorses of the older generation. I don't know what the textile industry would have done without you, and here's congratulations to you of a big job well done.—CHARLES W. ALLISON, SR., *Allison Fence Co., Charlotte, N. C.*

I note with interest the photograph of the three survivors of your tallyho ride at Asheville in 1906. You North Carolinians apparently are longer lived than our people down here. I am the only person living who was present at the organization of the Cotton Manufacturers Association of South Carolina at Lake Toxaway that same year—1906. I have a large photograph of those attending the organization meeting and recently at the request of John Cauthen I have been trying to get up an identification list of those in the photograph. There are still about 20 whom none of us have been able to identify. If I get a suitable opportunity, I am going to bring this photograph by

your office and I believe that you could help me identify certainly a few of the presently unidentified members.—R. B. PITTS, *Agent, Camden, S. C.*

I have carefully read your 40th anniversary number, and want to congratulate you and your associates on this fine issue. I wish also to extend to you personally, my very best wishes for many, many happy and prosperous years ahead. You have rendered great service to the textile industry, in many ways, and your friends are grateful to you for the leadership you have shown, over the years, in so many worth-while projects.—WILLIAM H. BARNHARDT, *Pres., Barnhardt Bros. Co., Charlotte, N. C.*

On behalf of my company, may I take this opportunity to express our congratulations and best wishes to you on this the 40th anniversary of TEXTILE BULLETIN under your fine guidance. As you may know, when I opened this office Jan. 1, 1950, for Anheuser-Busch to come into the textile market of the South on corn products, yours was the first textile magazine in which we took out advertising space. We hope that this will be continued for the next 40 years under

your fine guidance.—CHARLES H. CONNER, JR.,
Southeastern Sales Mgr., Corn Products Dept., Anheuser-Busch, Inc., Charlotte, N. C.

What a thrill it must give you, Dave, to look back over your productive years in the publishing business! For each and every year testifies that you have treated your customers fairly and squarely and have given them full value for the money spent for your publications. In addition, too, you have given so freely of your time and leadership to activities outside of your business, most of which have aided materially in advancing textiles in the field of education as well as manufacturing. Established 1911, forty years—that's a long, long time, and I'll wager your records reveal that the children and grandchildren of many of your original clients have subscribed for your splendid publications. There is something mighty comforting in a long record of services to the textile industry.—W. J. CARTER, *executive vice-president, J. P. Stevens & Co., Inc., Greensboro, N. C.*

Congratulations on 40 years of splendid service to the textile trade through your excellent publications. Your 40th anniversary issue has been read with keen interest by me. Since 1920 in Alabama I have read with profit and enjoyment your various publications and you are indeed to be commended for a grand job. My very best wishes to you for many more happy and prosperous years.—W. M. FIELD, *Sec., Barnhardt Bros Co., Charlotte, N. C.*

While I have not been following your activity for 40 years, ever since I have been connected with the textile industry your publication has been the only one which I have read continuously during the time I have been familiar with the textile industry. During this period you have certainly fought many battles in behalf of the textile industry, most of these battles were in cases where you personally gained nothing, but you have continued your service to

those who benefited in many ways. As one of those who benefited, I should certainly like to take this opportunity to thank you for all the good things you have done for the textile industry, and wish you and your good organization many more years of successful activity.—MASON P. THOMAS, *Pres., Hadley-Peoples Mfg. Co., Siler City, N. C.*

Congratulations again on your 40th anniversary. You have many compounded reasons to feel happy and proud—HARRY C. COLEY, *Pres. and Treas., Howard Bros. Mfg. Co., Worcester, Mass.*

I would like to take this opportunity to tell you that I always enjoy reading TEXTILE BULLETIN, especially the editorial pages. I appreciate the comments therein very much. My father, W. C. McAbee, Sr., must have been one of the first subscribers, as I can remember his receiving SOUTHERN TEXTILE BULLETIN in 1912.—W. C. McAbee, Jr., *Experiment, Ga.*

It is indeed a pleasure, yes, a real thrill to me—to receive the March, 1951, issue of TEXTILE BULLETIN, and to think back of your four decades of progress—40 years of sustained friendship with you and your ever growing organization, and to have the opportunity of again extending to you and your associates my hearty congratulations, and to wish you one and all continued health, happiness and prosperity.—FRANK G. NORTH, *Frank G. North, Inc., Atlanta, Ga.*

Congratulations on the 40th anniversary of TEXTILE BULLETIN. It is a splendid publication. I particularly enjoyed Jim McAden's story about the progress which you and your associates have made since your humble start in 1911. With sincere good wishes for 40 more.—THOMAS G. LYNCH, *Asst. to Pres., Piedmont and Northern Railway Co., Charlotte, N. C.*

Some Mill Men—What They Were Doing In 1911 And What They Are Doing Now

1911—BENJAMIN F. AIKEN—1951

Overseer of carding,
Anderson (S. C.) Mill
No. 2.

Overseer of carding,
Erwin (N. C.) Cotton Mills
No. 5.

His comment: Learned to spin in 1890.

1911—C. L. ALLEN—1951

Second hand spinning,
Newnan (Ga.) Cotton
Mills.

Overseer of spinning,
Monroe (Ga.) Cotton
Mills.

1911—R. T. BARNETTE—1951

Second hand in carding,
Rhodhiss, N. C.

Overseer of carding, Linda
Mills, Cowpens, S. C.

1911—HOWARD BARTON—1951

Doffer in Nantucket Mills, Supt., Rayon Mill of
now part of Fieldcrest Fieldcrest Mills,
Mills, Spray, N. C. Spray, N. C.

1911—B. W. BINGHAM—1951

Supt., Capitola Mfg. Co., Supt., Algodon Mills,
Marshall, N. C. Bessemer City, N. C.

Intermediate positions: Supt., Virginia Mills, Swepsonville, N. C., and Gen. Supt., Brookside Mills, Knoxville, Tenn.

1911—J. A. CHASTEEN—1951

Weaver, Woodside Mills, Overseer of weaving,
Simpsonville, S. C. Monroe (Ga.) Cotton Mills.

1911—CHARLES A. CANNON—1951

Clerk in payroll department Pres., Cannon Mills Co., of Cannon Mills, Kannapolis, N. C., and Kannapolis, N. C. other points.

1911—ALEX CATON—1951

Clerk in payroll department Mgr., Gray Goods Sales of Cannon Mills, Division of Cannon Mills, Kannapolis, N. C. Kannapolis, N. C.

1911—M. B. CLONIGER—1951

Overseer of spinning, Supt., Arlington, Arkay and Arlington Mill, Gastonia, Mutual plants, Textiles, Inc., N. C. Gastonia, N. C.

His comment: Began at five cents a day as spinner in 1891.

1911—L. B. COLBERT, JR.—1951

Card grinder, Riegel Overseer of carding, Riegel Textile Corp., Trion, Ga. Textile Corp., Trion, Ga.

1911—A. R. ELLER—1951

Overseer of carding and spinning, Anchor Mills, Huntersville, N. C. Night Supt., Linn and Corriher Mills, Landis, N. C.

1911—F. M. FOWLER—1951

Weaving at Spartan Mill, Supt., Hart Cotton Mills, Spartanburg, S. C. Tarboro, N. C.

His comment: Began as sweeper in 1908.

1911—C. L. GOODNOUGH—1951

Doffer, Brandon Mill, Greenville, S. C. Second hand in spinning, Woodside Mills, Simpsonville, S. C.

1911—C. W. KALE—1951

Overseer of spinning, Imperial Yarn Mills, Belmont, N. C. Supt., Stowe Spinning Co., Belmont, N. C.

Intermediate positions: Supt., Imperial Yarn Mills, and Supt., Sterling Spinning Co., Belmont, N. C.

1911—F. M. KIMBLE—1951

Bookkeeper, Poulan (Ga.) Office Mgr., Tifton (Ga.) Cotton Mills.

1911—D. M. LEFLER—1951

Overseer of spinning, Cannon Mills No. 3, Concord, N. C. Overseer of spinning, Corriher Mills, Landis, N. C.

1911—R. L. MARONEY—1951

Maintenance man in Salisbury (N. C.) Cotton Mills Master mechanic, Tifton (Ga.) Cotton Mills.

1911—S. A. MAUNHEY—1951

Sec. and Treas. of Kings Mountain Mfg. Co. and the Anna Cotton Mills of Kings Mountain, N. C.

His comment: The Kings Mountain Mfg. Co. was organized in February, 1888, and began operations in 1889. During my 54 years in the textile industry, I have witnessed radical changes in the operation of mills. I have witnessed one quick drop in cotton from 43 cents to 13 cents. I have seen the workday go from 16 hours to eight hours and day wages make a great advance. Just what we are headed for seems right hard to indicate but one thing is certain—that we are doomed if we do not, as a nation, right about face and put our trust in God.

1911—W. C. MCABEE—1951

Operating stitcher and brusher at Glen-Lowry Mills, Whitmire, S. C.

Asst. Supt. in charge of sewing room at Lowell Bleachery, Griffin, Ga.

1911—J. G. MCNEILL—1951

Loom fixer, Chiquola Mfg. Co., Honca Path, S. C.

Supt., Ninety-Six (S. C.) Cotton Mills.

His comment: Began as sweeper in 1901.

1911—LEE MEDLIN—1951

Doffer at Mooresville (N. C.) Cotton Mills.

Overseer of carding, Linn Mills, Landis, N. C.

1911—W. R. PARKER—1951

Doffer, Manchester Mills, Macon, Ga.

Supt., Strickland Cotton Mills, Remerton, Ga.

Intermediate position: Supt., Bibb Mill, Porterdale, Ga.

1911—T. J. PARNELL—1951

Band man at Pelham (Ga.) Mfg. Co.

Overseer spinning, Tifton (Ga.) Cotton Mills.

1911—D. B. PARRISH—1951

Second hand in twisting, Clover (S. C.) Mills.

Supt., Bowling Green (S. C.) Mfg. Co.

1911—T. B. REYNOLDS—1951

Card tender in Bibb Mills, Porterdale, Ga.

Supt., Tifton Cotton Mills at Tifton and Poulan, Ga.

1911—C. E. ROBERTS—1951

Warper hand at W. A. Handley Mfg. Co., Roanoke, Ala.

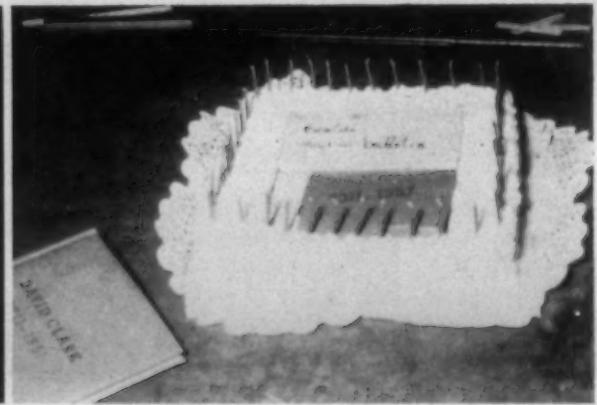
Pres. and Mgr., Franklin Novelty Yarn Co., Lavonia, Ga.

1911—EDWARD W. SWIFT—1951

Pres., Muscogee Mfg. Co. and the Swift Spinning Mills, Columbus, Ga.

Chm. of board of Muscogee Mfg. Co. and the Swift Spinning Mills, Columbus, Ga.

His comment: I am proud of the textile industry and



Last month the shop employees of Clark Publishing Co. and Washburn Printing Co. commemorated the 40th anniversary of David Clark's founding of TEXTILE BULLETIN by presenting the editor with a 40-candle cake decorated like the magazine's front cover, along with an especially-bound copy of last month's issue bearing employees' felicitations and signatures. At right J. Robert Keever, a Clark linotype machinist-operator for the past 28 years, expresses on behalf of his fellow workers remarks appropriate to the occasion.

consider it a priceless privilege to have been so long associated with it.

1911—L. W. SAFRIT—1951

Card grinder, Patterson Mills, China Grove, N. C. Overseer of spinning, Corriher Mills, Landis, N. C.

1911—E. S. SUMMER—1951

Supt., Mollohon Mills, Newberry, S. C. V.-Pres. and Gen. Mgr., Monroe (Ga.) Cotton Mills.

1911—H. P. THOMAS—1951

Section hand in spinning, Capitola Mfg. Co., Marshall, N. C. General overseer of spinning, Algodon Mills, Bessemer City, N. C.

1911—R. E. THOMPSON—1951

Section man, Wiscasset Mills, Albemarle, N. C. Overseer of spinning, Linn Mills, Landis, N. C.

1911—E. G. WAITS—1951

Overseer carding, Banner Mfg. Co., Goldville, S. C. Overseer carding, Monroe (Ga.) Cotton Mills.

1911—GUY WALLACE—1951

Learner in shops, Monroe (Ga.) Cotton Mills. Master mechanic, Monroe (Ga.) Cotton Mills.

1911—G. W. WRIGHT—1951

Firing boilers and running engine, Linn Mills, Landis, N. C. Master mechanic, Linn Mills, Landis, N. C.

TESTING – And Its Uses In Better Manufacturing

By PROF. DAME S. HAMBY, North Carolina State College School of Textiles

THE Pressley fiber tester is used to determine the strength of the fiber in thousandths of pounds per square inch.

There are a number of "dos" and "don'ts" to be remembered in using the Pressley. The first thing is to get the fibers perfectly parallel, usually with a comb, so that the fibers will be lying perfectly straight in the jaws of the tester when you make the break. Once the fibers are parallel it is best not to handle the sample anymore than you can help and especially the part of the fiber that is to be broken. A fairly small sample is used, and it is supposed to break on the beam of the tester from ten pounds to 21 pounds. The beam is calibrated for 0-22 pounds. You find the best results however if the fiber breaks between ten and 21 pounds.

Once the test has been made the Pressley index is cal-

culated. The weight of the fibers in milligrams is taken, and then the pounds reading from the Pressley beam divided by the weight in milligrams of the fibers you actually broke gives the so-called Pressley index. That can be calculated in pounds per square inch of the fiber itself.

The test gives a good estimation of the strength of the fiber itself. The result can be used in a number of different ways, depending on what type of product you are making and what type of mill you are operating. If you are interested in strength you should, of course, have a strong fiber to start with. You can not make a strong yarn from a weak fiber. That is one of the things this test does; it helps you to control or helps you to predict the strength of the finished product.

All of these fiber tests, whether for strength, fineness,

maturity, staple length or anything else, enter into the final picture of quality. Some of these factors are more important than others in certain cases. For exceptionally fine yarns fiber fineness is more important than any of the rest, while for strength of the yarn fiber strength is just as important as fiber fineness.

Chairman Meikle: What is the time element on the Pressley?

Mr. Hamby: It should be about 200 tests a day by the operator. That includes preparation of the sample for testing by combing, the mounting of the sample between the jaws, cutting off the extra ends, weighing it, taking the reading and so forth. You should be able to do at least 200 or more of them per eight-hour day.

Question: How many tests should you do on each bale to get a fair representation of that bale of cotton?

Mr. Hamby: That depends on the use you are going to make of the cotton. For average results two or three samples per bale are enough. Some of the mills use these tests to purchase cotton by. Then it is better to test every bale coming in, one or two samples from each bale.

Question: You said something about calibration. Will you explain that?

Mr. Hamby: That is the graduation of the beam itself. To get what is considered an accurate reading it should be between ten and 21 pounds.

Chairman Meikle: From the Pressley can you determine what the breaking strength of your yarn would be?

Mr. Hamby: You can get a very good approximation of the yarn's breaking strength if you know the Pressley index of the strength of the fiber, the fineness of the fiber, and the staple length of the fiber. Those three things are more important than any of the rest of them. There are other factors that enter into it, but if you know those three factors—the length, the fineness, and the strength of the fiber—you can get a good approximation of the yarn strength. That is actually done. If mills do buy their cotton by this fiber test they set up specifications for those three qualities and buy their cotton by those qualities. Now, it is not an easy matter to start right in and approximate the yarn strength. The best way to do it is to buy the cotton, measure these qualities and see what you get. Then with a backlog of information you can get a fairly good approximation of what the yarn strength will be for a certain type of cotton.

Chairman Meikle: Of course, particular conditions at the individual mills would vary.

Mr. Hamby: Yes. That is why you can not say a particular type of cotton will give a certain yarn strength. Conditions at the mill affect it, and also what you are making—whether you are making fine yarn, or whatever it happens to be.

Fibrograph

The Fibrograph is used to measure staple length, the so-called uniformity ratio. The sample is prepared by combing it out, straightening it out. It is put in the machine, and a card or a picture is drawn of the fibers by the machine. From that picture or that card you can readily calculate the estimated classer's length, which is usually the same as the classer's length or very close to it. Usually it is within 1/32nd of an inch. The test also gives you some information as to the distribution of the fiber length in the sample that you have.

The use of this machine takes about as much technique as any of them, or more than most, because you have to get a smooth curve and that takes quite a bit of technique.

Question: Just how practical would that be where you have quite a number of bales of cotton that you want to check in a day's time? How many samples can you check on that in a day?

Mr. Hamby: Taking the sample, setting it up and making your calculations, you can do one in about five minutes or maybe a little less, depending upon the speed of the operator.

The uniformity ratio, which is another important thing that comes from this machine, gives you some measure or some indication of the fiber lengths in the sample you are using. It is the average, from very short to very long.

That average length divided by the upper half mean length is the uniformity ratio. If the uniformity ratio is above 80 you have a very uniform fiber length; from 76-80, average uniformity; 70-75, slightly irregular; 70 and below, irregular fiber length. What it measures is uniformity or regularity of the staple length in the sample you have; that is, whether you have a few fibers very long and the rest of them very short or whether you have a fair proportion of all length fibers. That is the information you get from the Fibrograph.

As to the uses of this test, the uniformity ratio shows the uniformity of staple length, which affects yarn strength and appearance, the waste, and quality in general. Also, the upper half means length is a very good approximation of what your classer would say your fiber is.

Chairman Meikle: Do you ever use that after cotton has been processed through the cards, say?

Mr. Hamby: You can use it anywhere in the process up to the time it is twisted.

Question: What would be the importance of that machine in checking the staple length of the cotton purchased?

Mr. Hamby: If you have a good classer and know what your length is, then there is no need to check the length unless you want to spot-check the classer. If you already know your length the important measure from this machine would be the uniformity ratio.

Question: If I understand correctly, you said that if you get a reading of 70 or below that denotes irregular fiber length, and if a desired breaking strength is wanted I presume you would not use that cotton?

Mr. Hamby: That is right. You have some long fibers and some short and do not have uniform distribution of fiber length. The uniformity of length, so far as strength is concerned, is just as important as strength itself. You want a good distribution; you do not want some very long and some very short.

Question: In buying cotton would not that put a barrier between you and the shipper, if you are going to reject every bale that does not come up to your tests?

Mr. Hamby: That depends on how you are buying cotton. If you set up certain specifications then you have a perfect right to reject any cotton that does not come up to your specifications. It might mean that right now you would have a hard time getting cotton. But if you set up certain specifications as to fiber length or strength or other qualities, then you would be perfectly free to reject cotton that does not meet those specifications. Is that what you mean?

Question: What I meant was that if we set up certain standards

Eastern Carolina S.T.A. Leaders

During this Spring's meeting of the Southern Textile Association's Eastern Carolina Division March 3 at the North Carolina State School of Textiles, J. R. Meikle, general superintendent of Rosemary Mfg. Co., Roanoke Rapids, N. C., relinquished the divisional chairmanship. Elected as his successor was J. E. Shaw of Rosemary, who previously had been vice-chairman. S. G. Riley of Pilot Mills Co., Raleigh, was advanced from secretary to vice-chairman, and J. P. Hughes of Eno Cotton Mills, Hillsboro, N. C., was named secretary.

New members of the divisional executive committee are J. K. Bruton of Erwin Mills, Inc., Erwin, N. C., and C. A. Phillips of Edenton (N. C.) Cotton Mills. Continuing on the committee are W. A. J. Peacock of Borden Mfg. Co., Goldsboro, N. C., and A. M. Moore of Erwin Mills, Durham, N. C.

The accompanying paper by Professor Hamby and the resultant floor discussions were featured at the meeting.

and reject any cotton that does not meet those standards and turn it back to the shipper, who probably has accumulated his cotton from a dozen different sources, maybe that shipper will say: "Well, if you are going to reject cotton unless it meets your specifications then you will have to pay a cent more a pound," or something like that.

Mr. Hamby: I do not know; that would be between you and the cotton supplier. It is like a mill's buying equipment such as spinning frames on specifications. If the equipment does not meet your specifications you are at liberty to send it back. Many cotton buyers and brokers, of course, do not have facilities for testing, and those are the ones that would be caught in the squeeze if mills begin to buy by specifications.

Question: It seems to me it would necessitate the shipper's sending samples of cotton in advance.

Mr. Hamby: That is done. There is one small mill that makes very high-quality, high-strength yarns. It does not have a cotton buyer. The general manager of that mill has samples sent in from his suppliers; and he separates those samples in his office as to grade, color, and so forth. He returns the samples of the cotton he wants and tells the supplier to send those bales. When the bales come in they are tested for staple, strength, fineness, etc., etc.; and then the mill either keeps them or sends them back. In other words, the bales are sent to the mill on tentative acceptance. Why the general manager does not test the samples originally sent in I do not know. This mill was forced to it because of so many rejections of its product for lack of strength in the yarn. Of course, not all organizations could do that. This small mill just happened to have a man who could grade cotton, and he graded it and then depends on the laboratory tests. Not many mills could do it; not many mills could get along without a cotton classer.

Question: Would you recommend that for a mill whose product has to meet rigid standards day in and day out?

Mr. Hamby: Yes. If a mill is making yarn that has to meet no specifications at all, that just has to stay together until it gets out of the plant, it would be wasting money in making these tests. But for any mill that has to meet any quality or strength specifications this would be valuable.

Micronaire

The next machine we are going to talk about is the Micronaire, which measures fiber fineness. All of you, I know, are interested in fiber fineness, because that affects quality. You weigh out 50 grains of cotton, fairly free from trash and foreign matter. That is weighed out and put down in the chamber of the machine. A plug is put in that compresses it, and the sample is subjected to 25 pounds of air pressure. You read directly from the float the fineness rating in micrograms per inch of fiber length. The reading is 4.7 for this particular sample of cotton. Anything that is below 3.0 micrograms is considered very fine, and in most of the cases too fine—anything below 3.0 micrograms per inch. Those fibers are very easy to nep and give a lot of trouble. Many mills reject any bale that has a fineness rating of below 3.0, because that cotton gives too many neps. I know of one particular mill making a fairly high grade of cotton sheeting and drills, twills, etc., and every bale of cotton that comes into that plant is rejected if it has a fineness rating of 3.0 or less. They spot-check for other qualities, but they test every bale for fineness. From 3.0 to 3.9 is considered fine; 4.0-4.9, average; 5.0-5.9, slightly coarse; and 6.0 and above, coarse.

We said a while ago that fiber strength affects yarn strength. It does to a great extent, and so does fiber fineness in the finer yarn counts. It depends on the particular fabric you are making whether your fiber strength or your fiber fineness is more important. They both enter into the picture in varying degree, according to what you are making. One mill I know of makes very heavy yarn for cord, but they do not test every bale that comes in.

They found that fiber fineness does not affect their particular cord as much as fiber strength. In other mills it is thought that fiber fineness is just as important as fiber strength. So it depends on your particular set-up, but both are very important characteristics.

In summary, how are these tests of fiber properties used, or how can they be used? As pointed out a while ago, there are a few mills that use tests of fiber properties in purchasing their cotton. I do not think the majority of the mills are doing that. But in my opinion it is on the way; I think it is coming; and I do not believe it will be too long, comparatively speaking, before all cotton will be bought by actual specifications, just as you sell your yarn or fabric. Some of the mills are doing it now.

If you do not use the result of fiber testing to aid in buying material you can use it for the control of neps, to aid in machine settings, to aid in making up blends, and also to predict the strength of your finished product. That has been done very successfully and is being done and is not too hard to do. The Department of Agriculture led the way in that a few years ago, and many mills are taking it up. Many mills are using that to predict the strength of their yarn.

Another test is the Shirley analyzer. That tells how much waste is extracted. Those machines are made in England, and some time back they were pretty hard to get. Before the pound was devalued the machine cost about \$1,800, with 12 months' delivery. Since the pound was devalued the price has dropped down to about \$1,200, with about six months' delivery. That test tells you about the amount of waste; it does not tell you much about fiber quality.

As to fiber maturity, there has been a lot of discussion as to the better method to use, whether actual count under the microscope or differential dyeing. There, again, the Department of Agriculture has done a lot of work. First of all, with the microscope, what you do is to make an actual count of the immature fibers and determine the percentage of mature fibers. Above 84 per cent is considered a very mature sample; 77-84, mature; 68-76, average; 60-67, immature; below 60, very immature. Anything below 68-76 is below average; anything above is, of course, above average. That is by actual count under the microscope, using an 18 per cent solution of caustic soda and actually counting the fibers.

Another method is by differential dyeing. You take a sample, determine per cent maturity by counting under the microscope and then dye it; and you do that until you get a series of samples of different shades and colors to use as standards. It takes a lot of experience on the part of the person using it for it to be of any good, and it takes a lot of samples. You have to know what you are looking for. It takes a lot of background and you have to develop a lot of technique for it.

Next, in the picker room we test the lap for weight, evenness and moisture content. Those are the three most common tests. The evenness of the lap can be tested from yard to yard or foot to foot, or whatever you may use, by the Saco-Lowell Lapmeter. That is one of the most important instruments in any quality-control laboratory. If you do not start off with a good lap you can not get very good results anywhere else.

Question: Can you check less than a yard length?

Mr. Hamby: Yes, you can check a half-yard or from foot to foot. Most mills use yard-to-yard tests.

Question: What limits should you use?

Mr. Hamby: Plus or minus two-fifths of an ounce. You should stay within these limits and never allow a variation greater than that. From that down.

Question: What percentage of the yards should come within those limits?

Mr. Hamby: Every yard. That is the maximum variation allowable. From that on down.

Question: What is the variation allowed on a half-yard?

Mr. Hamby: I do not know. On a yard I know it is plus or minus two-fifths; on a half-yard it should be a little more.

Question: What would it be on a third of a yard?

Mr. Hamby: I do not know. If you have a thick spot or a thin spot it begins to average out on a yard, but if you take a third of a yard and have a thick spot or a thin spot it will show up more and for that reason the limits will be higher.

Moisture Tests

For moisture we have two tests. We have the Aldrich regain indicator, which shows moisture pick-up. Any amount of moisture pick-up is shown on the scale.

Then, there is the Brabender oven. This is a fairly new oven, and it cuts down considerably the time needed for moisture testing. The method is that you weigh out ten grams of cotton in the little basket (that is standard; you have to use ten grams); then you put the sample in the oven, and for cotton it takes about 35 to 40 minutes to determine the moisture in the sample. The scale shows the moisture content, not moisture regain. At the end of 30 minutes you read it. That is why you have to have ten grams; this scale is calibrated to that weight.

This machine is coming into use more and more because of its speed. The time with the old Emerson oven was two hours or more. This can be used on any cotton or fiber in any form where you can get a ten-gram sample. Probably many of you are used to working with moisture regain. If so, you can convert your regain to content very easily.

Question: Wouldn't that be a small sample for a slasher?

Mr. Hamby: For the slasher—we have done tests for the slasher. We have done tests on this and on the Emerson oven and found there was very little difference for moisture regain.

Card Room Tests

The next spot where you find a lot of testing being done is in the card room. That is where you do a lot of control work, and if you do a good job it shows up in the spinning room. The most important tests are those for the size of the stock, sliver or roving or whatever it happens to be; for evenness of sliver or roving, and for the number of neps.

We have some templates which were designed by the research department here at the School of Textiles. This method is considered a little more accurate than trying to count the neps on a board. You know, you get to the point where you wonder if you counted this nep or not. This method eliminates that and also helps to eliminate operator fatigue, which is very important. These nep boards have holes for the samples and you can count them one at a time. The sample is taken from the card web and lies in the template and is locked in place. That keeps the sample from being disturbed or broken up in any way. You can carry this into the laboratory or anywhere else and do your counting.

Chairman Meikle: Are there any determined standards for neps, or is that up to the individual mills?

Mr. Hamby: The Department of Agriculture issues standard nep

counts for different types of cotton in its quality reports. Outside of that I do not know of any industry standards that have been set up. The individual mills have to set up their own standards. Even from operator to operator you find a tremendous difference, and from counter to counter among the people that count them.

Question: What indication as to the degree of nepiness in the yarn do you get from nep count for the card web? Mr. Feng, will you answer that question for me?

Ivan Feng, research department, State College Textile School: There is a definite correlation. What the exact ratio is I do not know.

Mr. Hamby: I do not know either. It is easy to understand that if you have a neppy web you are going to have neppy yarn. Whether you get the same degree of nepiness I do not know.

Question: If you count the neps on the card and then again on the drawing do you find any correlation there?

Mr. Feng: We have found that drafting does increase the nep count. The over-all increase from the card is 140 per cent. Drafting does affect your nep count.

Question: How does combing affect it?

Mr. Feng: As you all know, your comb does take out a very good percentage, mostly of neps. We have a very interesting graph showing the nep counts, the rate of increase in the nep counts before you comb the cotton and after you comb it. After combing it you find that the increase levels off, so combing takes out a good deal of the neps. You also find that fibers that have a tendency to nep but are not yet in nep form are also taken out.

Question: I should like to know from any of the group what they have found with reference to nep counts on certain types of cotton, if anyone has that information.

Mr. Feng: I should like to say that our department has made a study of nep counts in mills in the South. We have a report of that in our office, and we shall be glad to give you a copy. By studying the reports from the various mills we have found that from 25 to 30 neps per 100 square inches is about average. It varies, of course, with the conditions in various mills and varies with the type of cotton, and so forth.

Question: That is per 100 square inches of card web?

Mr. Feng: Yes, 25 to 30 neps per 100 square inches of card web.

Question: What weight sliver would that be?

Mr. Feng: None of those mills indicated what weight sliver they were running. Naturally, those standards can not be compared from mill to mill. One mill might be running 50-grain and another 60-grain sliver. If we compare those results we should convert those slivers to a weight basis.

Question: Which makes more neps, very long draft or that same draft distributed over three machines? In other words, one-process roving or three-process?

Mr. Feng: Our studies show that with high draft in the early processing and low draft in the later processing it all evens out and that your ultimate increase is, around 140 per cent. I do not know whether that answers your question or not.

Question: How about high draft all the way through?

Mr. Feng: High draft all the way through—we have not studied that too closely yet. From two different studies we have made, high draft in the early processing may cause a few more neps. Then by reducing the draft in the later processing it evens out. Most of our work has been in the carding.

Question: Did you say definitely that there are neps in spinning?

Mr. Feng: Yes. Drafting does cause increase in neps. The more



Leaders of the Eastern Carolina Division, S.T.A., left to right: J. R. Meikle, J. P. Hughes, J. E. Shaw, S. G. Riley, Jr., and C. A. Phillips.

you draft it, the more you process it, the more neps you will have. All those fibers are neps potentially—that is, the fibers that are immature—may produce neps during the processing. It was reported that you make neps in high-speed winding. You do make them as you go through.

Question: Do you realize that certain cotton has more neps than other types? Now, what process produced them—over-baking, over-ginning, over-machining? What causes some cotton to have more neps than other types? Can anybody answer that?

Mr. Feng: That has been our problem for the past several years, trying to find out how neps can be eliminated or how they can be controlled. Of course, some varieties of cotton are more neppy than others. The ginning process has something to do with it, and carding and other processes in the mill. Neps are being made everywhere, so it is up to the mill man to set his cards right, to run at the right speed, and so forth.

Question: How much time would it take to run cotton through the mill and make a nep count for each process? Can you take a nep count on the picker?

Mr. Feng: We have tried it, but it is quite difficult. We have tried taking a nep count on raw stock, but we have no conclusive results yet.

Question: You talked about speed affecting the number of neps. Does higher speed on the front roll give you more than lower speed? In other words, if you were drawing 88 feet per minute what would be the comparison between 88 feet per minute and, say, 125? Would you get more neps with the higher speed or with the lower speed?

Mr. Feng: Well, I am not sure of what the answer to that would be. I should think that the speed would have no effect in the drafting.

Question: Do you think that neps may be caused by the drying process that is used on cotton before it is started through the gin, in which the cotton is dried at a rather high temperature?

Mr. Feng: I am quite sure that the more cleaning you do at the gin the more you nep up the cotton.

Question: I am speaking of the drying process carried out at the gin. They just dry the moisture out of it in order to knock out more of the trash and other dirt that is in the cotton. Then, of course, the moisture comes back into the cotton while it is sitting out.

Mr. Feng: I have not made any studies on that.

Question: I should like to ask if neps are formed in the spinning room.

Mr. Feng: There are fibers there that have a tendency to nep, and the action of the rolls will cause nepping.

Question: It is not the roll setting or things like that which cause the nepping?

Mr. Feng: Roll settings, we have found, have no effect on that.

Evenness Testers

The evenness testers we have on the table are two of the most common type. There are others that we do not have. Some are fairly new, as compared with some of the others. The Uster is one of the new ones. Pacific Mills has also developed an evenness tester—so has I.T.T. They call theirs the Brush uniformity meter and it is sold by the Brush Development Co. We have the Saco-Lowell, which was one of the first ones to be used successfully, and the Uster. The Saco-Lowell is limited in the scope within which it can operate. It is not very successful on roving. You can not run fine roving on it at all, and it is rather hard to find the dividing line between what you can run on it and what you can not. It is designed essentially for sliver. It has a cam and a follower device. The sample goes through the cam, and then the follower comes down on it. It compresses the sliver, and if the sliver is thin the follower will go down; if it is thick the follower will go up. You get the average maximum variation per yard for a number of yards, say ten. For this machine a sliver with an average maximum variation of 12 per cent is considered pretty good card sliver. Roughly,

a finisher sliver variation of around twenty is considered pretty good.

Chairman Meikle: What is the advantage of the Saco-Lowell or the Uster on sliver?

Mr. Hamby: It is a little quicker on the Uster.

Question: Is the Uster any more accurate than the Saco-Lowell?

Mr. Hamby: The answers are different. You do not get the same answers from both. What is the true picture of the sliver I do not know. The Uster is supposed to measure the mass of the gross section we place between the plates. This other machine also measures it in a different way. Which of the machines actually gives you the variation of the sliver I do not know, and I do not know how to find out. The Saco-Lowell may show 40 per cent; the Uster may show 50 per cent. Whether it is forty or fifty I do not know. Each is an index.

Question: I have run the sample of sliver through both of them and got practically identical results.

One advantage of the Uster is that you can test slivers to very fine yarns on it. You can go to fairly heavy sliver and up to 100s or 150s yarn. That is the main advantage of the Uster, or it is one of the big advantages. Also, you can get other characteristics by using the Uster. You have an integrator here, and you can make a chart, also. On the chart it is recorded as percentage of variation. If you are testing yarn and you get a nep or a piece of trash or anything that will cause a sudden or quick surge on your chart, if you go along and get the maximum variation you get that high peak, although it may be that only one nep has passed through. By using the integrator you get the weighted average and get the true relation of the high peaks to the quality of the yarn. You get a true over-all picture. If you take the chart and use those peaks as your average maximum variation you will get an altogether distorted picture of your yarn. You can take the chart and locate trends, locate definite patterns in it; and you can know which machines back in the processing are giving the most uneven stock. You can go back and locate the source of what is causing you some of your variation and by a process of elimination you can bring down that variation and make yarn that is fairly uniform. For the first time you can actually measure and give a numerical value for evenness in yarn. Before that you could get only a comparison of yarn with yarn. Now, with this type of equipment, you can actually measure it and say "This yarn has 40 per cent variation," and so forth.

Chairman Meikle: Normally what length of sliver is required?

Mr. Hamby: Normally a ten-yard length of yarn or sliver or roving or whatever you are testing.

Question: Do I understand from what you said that you can make a nep count on that?

Mr. Hamby: Neps will show up on it, but you can not make a nep count by it because other things will show up as well as neps—bits of trash and so forth.

Spinning Room Tests

Once you get into the spinning room you get into a few more additional tests that are made, and the number of tests you make there and the kind of tests depend on whether you are making sales yarn or making it for your own plant, or what. You test for single-end, strength, skein strength, yarn number, twist, grade, evenness, moisture, etc.

The Scott skein tests can be used there for skein testing, as well as for testing the bursting strength of fabric. It is now set up for skein testing. We also have a quadrant balance which is nice to have because when you test your

skein for strength you can get your yarn number for the same skein, the same 129-yard length; and it gives you a good approximation of your break factor. This method is much quicker, by using the quadrant balance. It eliminates a lot of operator error and is much quicker.

Question: Mr. Hamby, can you use that strength product (it is called that; I believe)—if you have a certain yarn that breaks at a certain number of pounds could you use that to estimate what the break factor would be on another cotton?

Mr. Hamby: They do not go in straight lines. If you have a cotton on which you are getting a break factor of 2,000 pounds you can not say that on a certain other type you will get a certain break factor.

The skein test is quick, easy to make, and does not cost very much. If you want to get the absolute strength of the yarn, single end, then you have to go to a single-end type of tester. The most accurate of that type is the inclined-plane tester. The pendulum type of machine has several inherent errors, one of which is friction. The inclined-plane tester has a little starting friction, but very little as compared to the pendulum type. So if you want greater accuracy you have to use the I.P. type or inclined-plane type. It is more expensive; you can not do as many tests per day; and then you have to take the results off the chart. You can not get the yarn number for the yarn you break on the machine from the single-end machine as easily as from the skein tester. If you are interested simply in strength testing, then use the skein machine. It is nice to have both types of testers.

As you start the machine up the plane inclines; the carriage is weighted, and it begins to apply load on the yarn. It has a quick return; that is one nice feature of it. You do not have to wait for it to return as slowly as it goes down. To change the capacity of the machine you take off one weight and put on another. It is set up now for 1,000 grams maximum load. From that chart you can see the strength, elongation, etc. The sample broke at about 460 grams. It stretched out to six per cent elongation when it broke. It started at zero and went up to that point, and at that point you calculate your strength.

Those two are the most common methods of determining the strength of materials, skein strength and single-end strength. You have to determine for yourself which you

want or which you need. The quadrant balance will soon pay for itself in operator time as well as in the improved results you get from it in accuracy and so forth.

Question: If you find that on the skein-strength test a certain break factor is satisfactory, can you assume that the single-end test will be satisfactory?

Mr. Hamby: You can assume that, but you have to take a lot of things into consideration. If you have to meet specifications, by which you have a minimum strength and everything below that minimum strength is rejected, then you do not have too much guarantee on your skein testing. You have to go to single-end testing to find out just exactly what is the weakest yarn you produce. There are a lot of factors. When you break a skein you break the weakest part of it, usually. Then you begin to get slippage; the yarn begins to slip and give away. The skein test is not the absolute strength of your yarn; it is an index of strength. There are a lot of variables that enter in.

Question: Does tying the yarn make any difference?

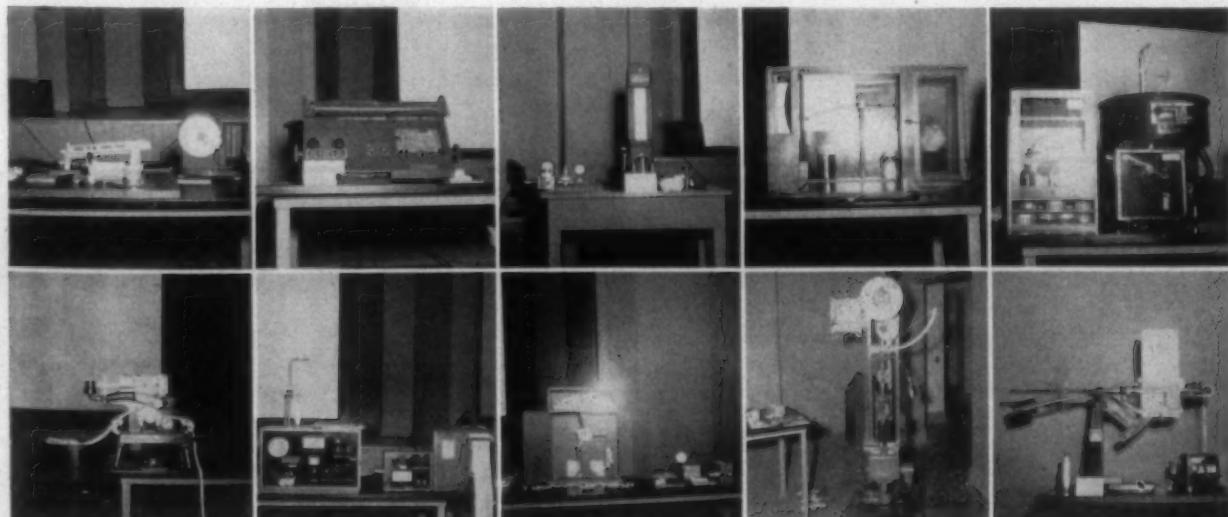
Mr. Hamby: I do not think you will find any difference in it, but I always like to tie it. I do not think you will find any difference in it whether you tie it or do not tie it.

As to testing twist, there are two methods of doing that, depending on whether you are using single-end twisting or ply twisting. There are two types of machines designed for that, which we do not have up here, either. One of them has a pendulum that swings back and forth. When you take out "S" twist and begin to put in "Z" twist you assume you have the same amount of contraction for "Z" twist as you did for "S."

For determining the grade of yarns we use United States Government standards, which are set up for A, B, C, and D grades. Wind the yarn; then take it and compare it with the standard. There is a set of these cards which can be obtained from the American Society for Testing Materials. By them you can grade your own yarn. I think you will find these very helpful in determining whether or not you are meeting specifications.

Fabric Testing

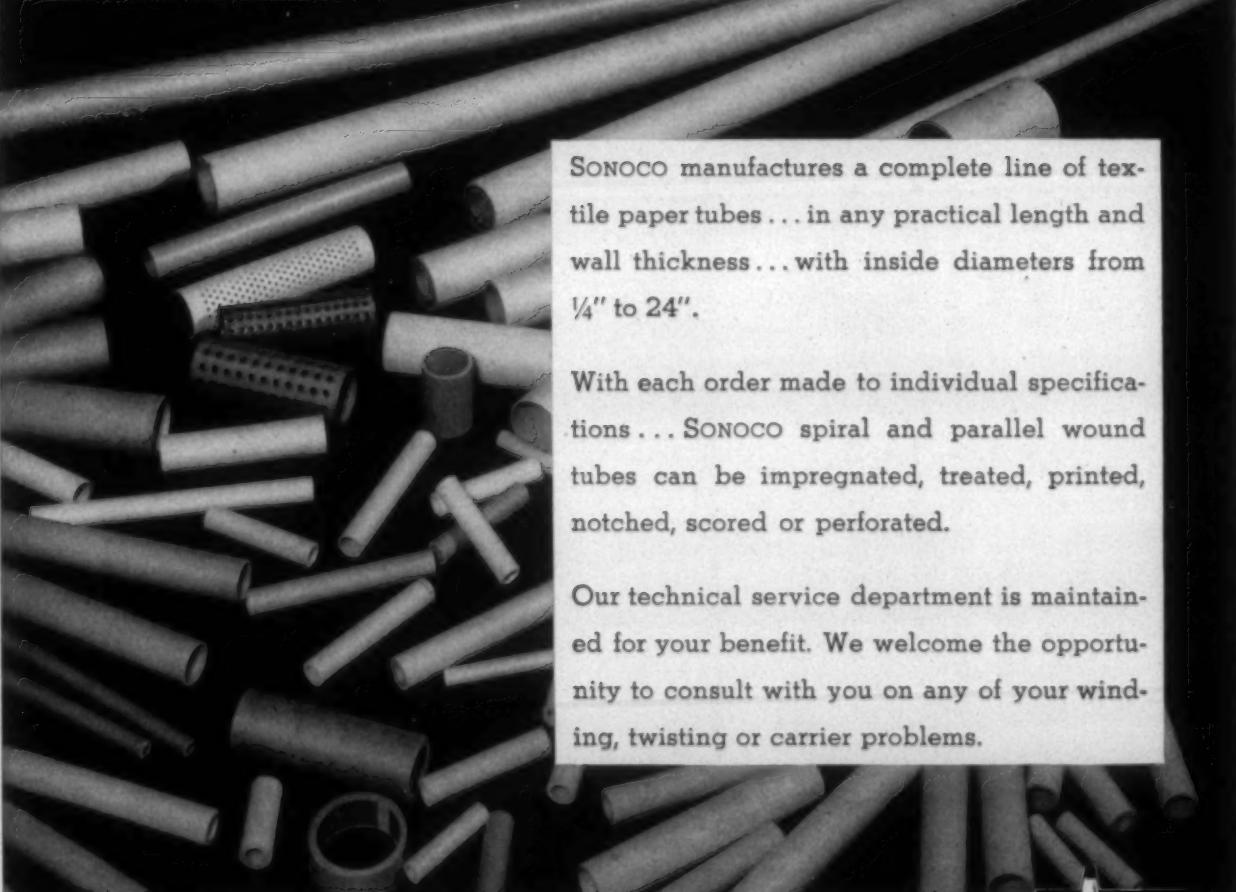
There are two common methods of determining the breaking strength of a piece of fabric, the so-called grab method and the strip method. In the grab method you use a sample four by six inches. The grab method is the



Here are most of the instruments described by Professor Hamby in his talk to the Eastern Carolina Division of the Southern Textile Association. Top, left to right: Presley fiber tester, Fibrograph, Sheffield Micronaire, Aldrich moisture regain meter, and Brabender oven. Below, Saco-Lowell sliver tester, Uster tester, yarn numbering quadrant, Scott tester, and IP2 inclined plane tester.

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preferred one; it is much quicker, and it is cheaper. You put your sample in the machine and break it, and the machine gives you a reading in pounds.

In the other method, the strip method, you usually get a sample 1.25 inches in width and ravel it down until it is one inch in width.

The grab method gives you a little higher strength than the strip method, but that is not why we prefer it. It gives a little more accurate picture. The operator can go around with a template and a pair of scissors and cut these samples out very quickly. When you cut a strip sample and begin to apply strain to the sample the threads in the center are the ones that take the biggest part of the load, because the edges of the sample are not held. This other form gives you a better index of how the fabric is going to react when it gets into the ultimate product.

If any of you are interested in determining tearing

strength there are two methods by which it can be done, the trapezoid method and the tongue method. In operating with the trapezoid method you use a piece of fabric and clip the sample at the top, to be sure of starting the tear directly in the center of the edge. You have to make a chart or graph with this type of test and read the result off the chart.

The next test is for the bursting strength of fabric. One machine used for determining bursting strength is the Mullen tester, in which you have a diaphragm under pressure. You have the same trouble with that as you have with any diaphragm type machine. Another machine is the ball-bursting tester, in which a steel ball is forced up through the fabric. The machine forces a steel ball right up through the center of the sample and gives you the number of pounds of bursting strength for the particular fabric or material involved.

Opening, Picking, Carding & Spinning

THE MILL OF TODAY

By ROBERT Z. WALKER

Part 24 — The Modern Lap Winder

THE lap winder is the latest addition to the machinery of the modern spinning mill and is rapidly becoming part of the standard equipment of any progressive spinning unit. The machine, in its present form and used in the modern manner, is comparatively new, although it has been developed from the old derby doubler and the ribbon lapper. The lap winder is used both for preparation before drawing or before combing, and as more and more mills take advantage of the refinements of lap back drawing, then there is a corresponding increase in the number of lap winders in operation.

The old, obsolete ribbon winders, sliver lappers and lap winders were machines which were used to make laps of slivers for creeling into the comber, or for the back of the card when double carding was employed. These machines were low production units, heavy, awkward to operate, and were ineffective because of inherent design. In this last respect an example can be seen in the manner in which an extremely heavy mass of fibers was drafted at the back of the machine. This drafting could not be controlled because of the bulk of sliver between the rolls and resulted in sliver which had a high evenness variation.

The modern lap winder is altogether different from its forerunners. In its present form, the machine is used to make a lap of slivers to be creelied into either the back of a lap-back drawing frame or into the comber. When the machine is used to make a package for drawing, there will be a lap nine inches in width, composed of 16 slivers arranged parallel to each other. When the lap is intended for combing, there will be 20 ends of sliver formed into a lap 10½ inches wide. In some models of lap winders, the drafting rolls have been removed completely and the

only draft is very small, 1.04, which is intended only to create a tension to hold the slivers straight in line. The advantage of using a lap winder before drawing is that the slivers are all of the same length and therefore run out at the same time.

The lap winder is a relatively new machine and is designed and constructed on a more modern basis than are most textile machines in the spinning mill. For this reason, and because only a simple winding operation is performed, the machine can be abused and still operate satisfactorily. This rugged character of the lap winder, in contrast to most textile machines which must be precisely adjusted to avoid serious work stoppages, is sometimes taken advantage of by permitting a lax cleaning and inspection program to be instituted. When maintenance is not adequate, the mill is eventually faced with a large repair bill and a problem of keeping up production while one of these high production machines is out of action. The lap winder is not an exception to the rule that all machinery must be systematically and periodically checked to keep quality and production up to standard and to prolong machine life.

Before checking the machine itself, the sliver cans should be gone over thoroughly. This applies not only to the cans at the lap winder but also to those which are at the card, the drawing frame, and the roving frame. Damaged sliver or roving cans are responsible for many defects in sliver, roving and yarn, and in many instances, the true causes of such defective work remains undisclosed while valuable time is spent checking the machines themselves. Sliver is weak due to the complete absence of twist and becomes weaker as it progresses from the card through the various drawing processes or comber, as the

OPENING, PICKING, CARDING & SPINNING

fibers become arranged more parallel to each other. When the roving cans act in any manner, either from the condition of the can or from the position of the can in relation to the creel, so that a drag is placed on the sliver, then there will be a disruption in the original evenness of the strand.

First of all, the cans should be in good condition. The sides should not be bent in or dented, as this cramps the sliver and prevents the arrangement of coils that will be pulled out freely and without tangling. Also, dented cans will not hold a full complement of stock without crowding or forcing the top slivers. Stretched sliver, which is uneven sliver caused by too much pressure being needed to pull it from the can, is the result of crowding sliver in a can or from using cans with rough edges or broken sides that catch and attempt to hold the fibers. Any roughness, and in particular on the top edges or on the sides where the can has been broken, will pull clumps of fibers loose from the proper position and will create unevenness. In some instances, sliver can be observed being fed forward with strips torn loose from and laying back along the main strand. This can be the source of extreme unevenness, and cannot be remedied by any number of subsequent doublings.

Uneven sliver may also be traced directly to the use of dirty cans. In time, unless preventive action is taken, cans will get greasy and sticky enough to cause lint and small bunches of waste fibers to adhere to the inside and bottom and around the top edge. If these accumulations are not removed regularly, then eventually they will become caught and carried forward with the good sliver.

Not enough attention is always paid to the positioning of the cans behind the frame to which the sliver is being

delivered. This placement of the cans is always important in preventing stretched sliver, but particularly so at the drawing process after combing, when the extreme parallelization of the fibers makes the sliver exceptionally unresistant to pull. The cans should be placed as close to the frame as possible and arranged so that the sliver from the back rows of cans do not have to travel over full cans in front, as the slivers tend to catch and drag on each other. In creeling in the lap winder, the inside row of cans should be placed directly under the edges of the lifting rolls on the sliver table in back, so that the pull will be directly upward without dragging on the can edges. The outer row of cans should be brought up as close as possible to the inner row. Many mills follow the practice of using cans which are half full on the inner row and full cans on the outer row, so that sliver from the outer row will not drag on the sliver from the cans of the inner row. Another advantage of this practice is that, as the cans contain unequal amounts of sliver, it is necessary to piece up only one-half of a set at a time. In creeling, the half-full cans are pushed to the inside and the full cans placed on the outer row.

The slivers from the individual cans should be brought up to the sliver table and carried forward in such a manner so that they come together at the end of the sliver table with the edges of adjacent sliver touching but not overlapping. The correct placement of slivers at this point is very important, as the packaging of lap is largely determined by this adjustment. Each sliver is drawn up from the can by a pair of lifting rolls, consisting of one bottom roll running the length of the sliver table and a small top roll for each sliver and is then carried forward along the table to the calender section. The individual sliver is guided by a highly polished capstan which must be adjusted to hold the sliver in its proper position. The sliver guides, the capstan, the lifting rolls, and the table must be kept free of lint and highly polished and clean. Rough or rusty spots on these elements coming in contact with the slivers will pull fibers and otherwise disturb the orderly array of the sliver. Accumulations of lint or gummy deposits on the top and bottom lifter rolls will prevent these rolls from coming in contact with each other when a sliver runs out or an end breaks. This must be avoided, as the two rolls are electrically wired to form a stop motion which halts the frame and prevents the forming of a lap with less than the correct number of ends. Immediate halting of the lap winder by the stop motion is accomplished by driving the machine by a motor with an integral solenoid operated brake. The brake should be adjusted so that the frame will stop by the time the broken end of the sliver has travelled approximately four to five inches. In piecing up the ends, they do not have to be actually pieced together, as it is necessary only to lay the new end over the old one. The friction and cohesion of the fibers at the slight overlap will serve to carry the new end forward. This method is preferred to piecing up, as there will be fewer thick and thin places made.

The lap is wound onto a lap spool which is clamped between two discs and held under pressure against the two large calender rolls. The proper functioning of the machine and the correct formation of the lap is dependent upon the adjustment of the discs, pressure systems, and upon the type of spool used. The most serious widespread complaint against the lap winder has been the waste and

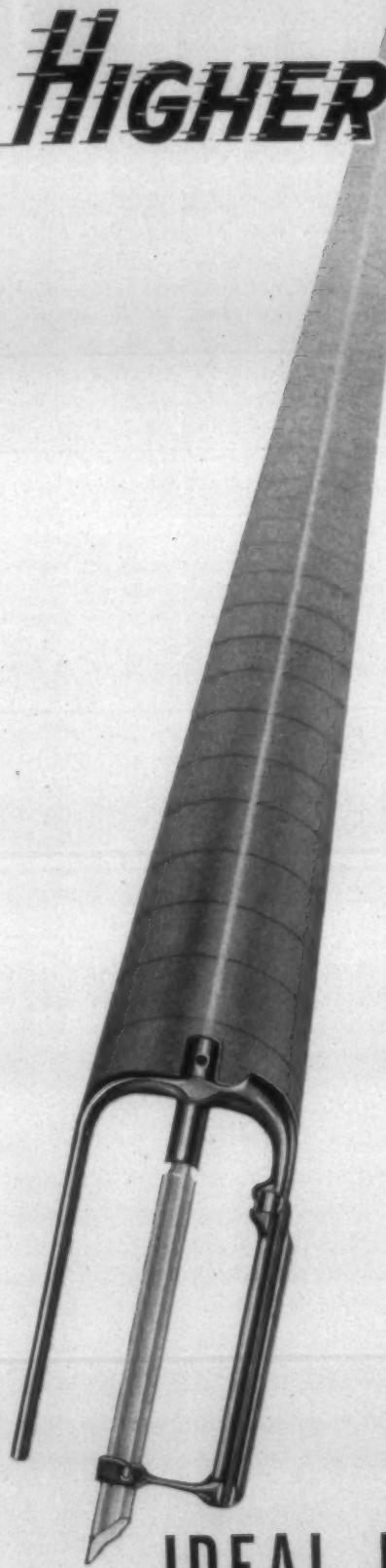


Collaborators of the Southern Regional Research Laboratory's cotton chemical processing division observed continuous processing experiments on the acetylation of cotton yarn during an annual conference in New Orleans last month. In this group are Walter M. Scott, assistant chief, U. S. Bureau of Agricultural and Industrial Chemistry, Washington, D. C.; Leonard S. Little, retired textile expert, New York City; Raphael E. Rupp of Pacific Mills, Lyman, S. C., and (rear) George Buck of the National Cotton Council, Washington, D. C.

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bad work caused by the heavy tangled slivers that are a part of the tail end of the lap or the end next to the spool itself.

The spools themselves should be carefully scrutinized and those with rough edges or splits discarded. There has been a great deal of improvement in the construction of spools within the last few years. All spools once were made of hardwood which had been turned to a high smooth polish. Some of these spools did not prove too satisfactory because of their high gloss which did not tend to hold the ends of the slivers in the initial starting of the lap. The slipping of the spool against the slivers would pull the ends so as to make a large tangled mass and approximately the first yard would be uneven. This was particularly serious when the lap winder was used to make laps for combing, as feeding of the tail end of the lap into the half lap and top comb of the combor would generally either bend or break out needles. Therefore, the general practice was to discard the first yard of the lap as re-workable waste.

The smoothness of the lap spool was overcome in many instances by covering them with a heavy denim or light canvas. The added friction of the cloth against the sliver tended to hold the slivers firmly and aided in making a smooth beginning of the lap, while it was still necessary to discard part of the tail end; some mills reported a reduction in the amount of waste from three per cent to one-half per cent by adopting a fabric covering. One present answer to this problem has been the adoption of spools constructed of a plastic material. These spools are extremely durable and will not slip or splinter and therefore will last almost indefinitely. Even more important, the surface of the spool, while smooth, has a high coefficient of friction which holds the slivers firmly and reduces slippage.

A recent innovation which has been quite successful has been the use of a special magazine on the lap winder. This magazine has an inclined plate covered with cloth. The cloth is partially immersed in a bath of water and a wetting agent so that at the doff the new spool rolls down the incline and becomes slightly moistened. This moisture is just sufficient to secure an immediate and firm grasp on the ends of the slivers. Therefore, the disarrangement of the fibers is eliminated. This device has proven very satisfactory and has reduced the waste created at this process.

Another factor having considerable influence on the amount of waste produced at the lap winder is that the laps may vary considerably in length. This variation in the number of yards per lap creates excessive waste, due to the general practice in creeling, where the tail end of the laps are broken out, in order to set in a new creel when one lap runs out. This method of creeling is preferred over the practice of allowing the tail end of the laps to run through the drawing. Not only is quality maintained and damage to rolls prevented, but in addition, the efficiency is greatly improved. In some instances, mills have complained about the variation of up to three yards in the length of the lap. This variation has been closely studied, and in most cases, where the knock off motions are operating correctly, the variation is found to be caused

by the stretching of the sliver. In some mills, a comparison of one sliver lap machine to another, with the same sliver, was found to be excessive, even though the knock off motions were set identically. The stretching of the sliver has been found in most cases to be caused by improper setting of the clamping mechanism of the spools. It is very important that these machines all be set alike to produce laps having identical lengths, in order that they will run out at the same time when on the drawing frame or the combor. The clamping mechanisms must be set so that there will not be any variance in tension between the discs of one lap winder than the other, for if one pair of discs clamp tighter than the other, the disc will not rotate as freely. Accordingly, there will be a slippage on the calender rolls which will cause the variation in the length of the lap.

Because the clamping mechanisms are continually being released and clamped during the operation of the lap winder, it is essential that they be checked and adjusted periodically once a week. With the proper attention, the laps can be produced with a maximum variation in length of three-quarters of a yard. There are some mills who give the lap winder the proper amount of attention which it deserves and are able to produce laps which do not vary more than 12 inches in length.

Several methods have been used to increase the length of the lap on the lap winder as it is felt that any increase in lap length will be reflected by an increase in machine efficiency, due to longer doffing and creeling intervals. One method of increasing lap length has been to substitute the standard 16-inch discs with 20-inch discs; 20-inch diameter laps will just clear the back plate of the standard five-roll drawing frame and therefore limit any further increase. However, a pneumatic rack control has recently been placed on the market. This pneumatic control has been described as much better than the standard drum and break assembly, in that a more even tension can be maintained. In addition, the added pressure allows more yards to be placed on the spool without increasing the diameter of the lap. Some tests have shown that on a 10½-inch lap winder with 30 pounds pressure, net weight of the sliver on the spool will be 21¼ pounds. This will be increased to 23¾ pounds of sliver using 40 pounds of pressure, and 24½ pounds of sliver using 50 pounds of pressure. The increase in the amount of sliver on the lap spool is particularly important when that spool is creeled into the combor because of the added interval between creeling periods. In some instances, the use of the pneumatic rack control has permitted using one combor tender for seven combors instead of six.

Du Pont Synthetic Renamed 'Dacron'

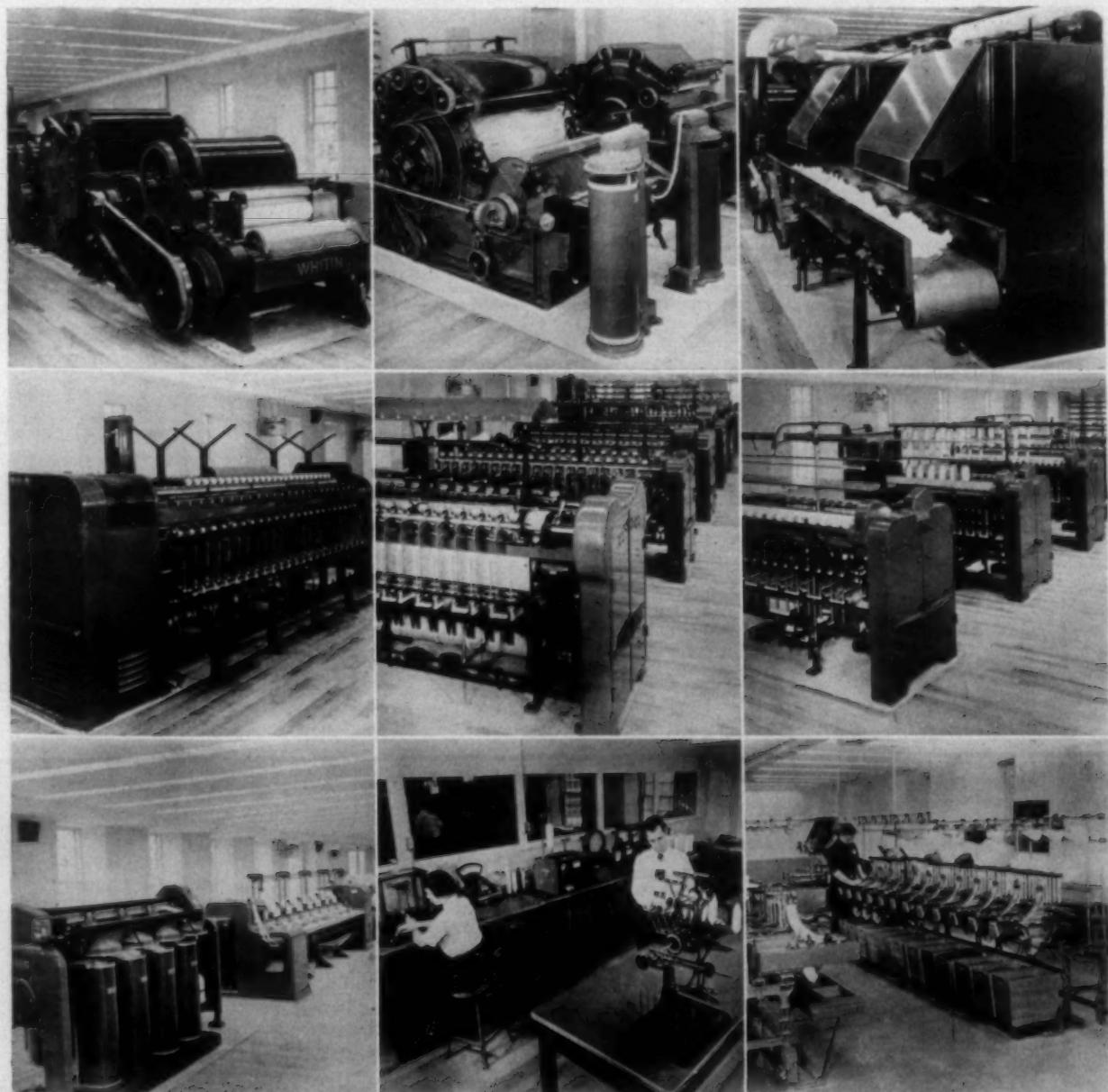
Dacron (pronounced DAY-cron) is the new trade-mark which has been adopted by the Du Pont Co. for its polyester fiber, originally known by the laboratory designation of Fiber V and later given the trade-mark Amilar. The Dacron trade-mark was substituted for the Amilar mark when the company received advice of its possible confusion with an unrecorded commercial name. Announcement was made in December, 1950, of plans to use a 635-acre tract on the Neuse River, near Kinston, N. C., for the manufacture of Dacron polyester fiber. Construction is expected to start this Spring.

Whitin's Research And Development Division In New & Larger Quarters

WITH the consolidation of the Whitin research, experimental development and textile laboratory testing divisions in one large, separate, completely-equipped building, the Whitin Machine Works has created at Whitinsville, Mass., what is one of the finest research laboratories in the world for the scientific study of fiber processing on preparatory machinery. At the official opening of the building April 16-18, more than 50 complete machines were on display and in operation. Also open for inspection were the testing laboratories with their scores of complicated ma-

chines, and specialized equipment for fiber and yarn analysis.

Many of the experimental, research, and development departments now housed together have been in existence for many years, some going back to the very early years of the shop's existence. From these departments has come new processes and techniques, machines, models and devices in steady and rapid procession for over 119 years. Previously these several departments were located in various places in the office and plant buildings. Bringing them all together in one large building with ample space and equipment pro-



These are views of the large variety of machinery installed in the enlarged research and development department of Whitin Machine Works at Whitinsville, Mass.

OPENING, PICKING, CARDING & SPINNING

vides the opportunity of increasing efficiency and greatly enlarging the scope of operations of the research and development division.

One of the major difficulties encountered in textile research arises out of the nature of the machines themselves. They require a large amount of space, and a very large number of different machines are needed for the various processes. Different types are required for each fiber, and last, but not least, a heavy investment in capital is required just to supply even a few of them. There are some mills in the country that use less machinery in the whole mill than is necessary to equip this new research and development division.

The new Whitin research and development division is housed in a four-story granite building that was built in the 1840s and operated by the Whitinsville Cotton Mills and lying on the north bank of the Mumford River, just below the main plant. The building was entirely renovated, and attractively redecorated. The most modern humidity and temperature controls were installed, as well as complete power and other utilities for operating the textile machinery, engineering experimental workshops, and laboratories.

Approximately 12,000 square feet of floor area on the first floor and a similar space on the second floor are required for the textile machines that will be used for demonstration and testing. The reception area, conference rooms, and one of the testing laboratories are also located on the second floor.

The third floor contains the engineering and other offices as well as the development engineering department and specialized research areas. One large area is devoted to a complete machine shop equipped with machine tools for making adjustments or changes needed quickly, or for making small experimental parts. For making large or more complicated parts, the facilities of the main plant are available.

Extensive Display of Machinery

The display of over 50 of Whitin's latest model textile machines covering all processes from opening through winding and knitting is one of the most important features of the research and development division. Mill men and customers interested in the performance of Whitin machinery will have the unusual opportunity of examining a fully equipped machine, running on the type of fiber in which they are interested. It would be possible for a customer to follow the processing of a given type of fiber, cotton, for example, from opening through picking, carding, drawing, roving, combing, spinning and twisting, and at any point in the process to know from detailed and complete laboratory analysis the quality of the product as it progressed from raw stock to yarn. The same machinery will also be used by the personnel of the department to run sample lots for research, development and testing purposes.

The complete range of machinery located in the first two floors is outlined below.

First Floor:

- 1 3 Cylinder 60" x 60" Woolen Card, equipped with a Double Apron Tape Condenser.
- 1 Wool Spinning Frame.
- 1 Complete opening line of machinery consisting of the following: Blending Feeders, Mixing Feed Table, Spirawhirl, Down-stroke Cleaner, Cage Sections and Aeroturn Dust Collector.

1 Single Process Picker, which consists of the following elements: Overhead Condenser, Automatic Hopper Feeder, Breaker Section, Intermediate Section, Intermediate Hopper Feeder, Finisher Section, and Aeroturn Dust Collectors.

- 1 Hard Waste Opener.
- 1 Return Air Condenser.
- 1 Rag Picker.
- 1 Roller Card equipped with card clothing.
- 1 Roller Card equipped with metallic wire.
- 1 Revolving Flat Card.
- 1 Staple Cutter.
- 1 Tricot Knitting Machine.
- 2 Whitin-Schweiter Automatic Filling Winders.
- 1 Schweiter Cop Winder.

Second Floor:

- 2 Worsted Drawing Frames.
- 3 Cotton and Staple Drawing Frames.
- 6 Roving Frames, consisting of the following: Regular Draft Fine Frame for cotton and staple fibers from 1" to 3"; Super-Draft Frame; Inter-Draft Frame (these two frames are made in two sections, each with two different sizes of rolls and draft gearing for flexibility in handling greater ranges of fiber lengths and are not, for that reason, typical production machines); 2 Long Draft Frames for worsted and synthetic fibers up to 7", one frame is 7" gauge, the other 9" gauge; Super-Draft Frame for processing worsted and synthetic fibers up to 7" (using the American System); and 1 Dandy or Ring Roving Frame (Worsted).
- 4 Model F-2 High Draft Spinning Frames for use on the following differing fibers and fiber lengths: For worsted and synthetic fibers up to 7" (using the American System); for cotton and short staple fibers; for medium staple fibers; for cotton fibers only.
- 1 Worsted Spinning Frame—French System.
- 1 Worsted Spinning Frame—Bradford System.
- 1 Sliver Lapper.
- 1 Ribbon Lapper.
- 1 Model J Comber.
- 8 Twisters (These are special purpose twisters and represent only a small fraction of the large number of models manufactured for a wide variety of uses). The following models are on display: Model K Trap twister for multiple ply carpet yarns; Model B for dry or wet twisting of cotton yarns and dry twisting of synthetic blend; Model B Novelty Yarn Twister; Model BJ Trap twister for 2-ply cotton, wool or worsted yarns; Model R Trap twister for 2-ply worsted paper fiber; Model C-6 for synthetic yarns; Model RL first process twisting for high tenacity rayon tire yarns; Model RM second process twisting for high tenacity rayon tire yarns.

On these machines it will be possible to process or test any type of common fiber or blend to determine how it behaves during the manufacturing process, or on the other hand to determine how the machines function in processing the fibers.

Research

The creation of this large, well equipped, adequately staffed laboratory should contribute greatly to progress in textile technology, both in terms of the solution of immediate technological and machine development problems and in long range research in fundamental textile research and machine development.

In the field of research, many broad areas are scheduled for study, covering the full range of the types of machinery manufactured. It will be the function of the research section to explore these areas with the objective of learning more about the nature and control of the fibers now known, and of new fibers as they are created by the synthetic fiber industry or discovered elsewhere. Other important objectives will be the discovery of new methods of processing

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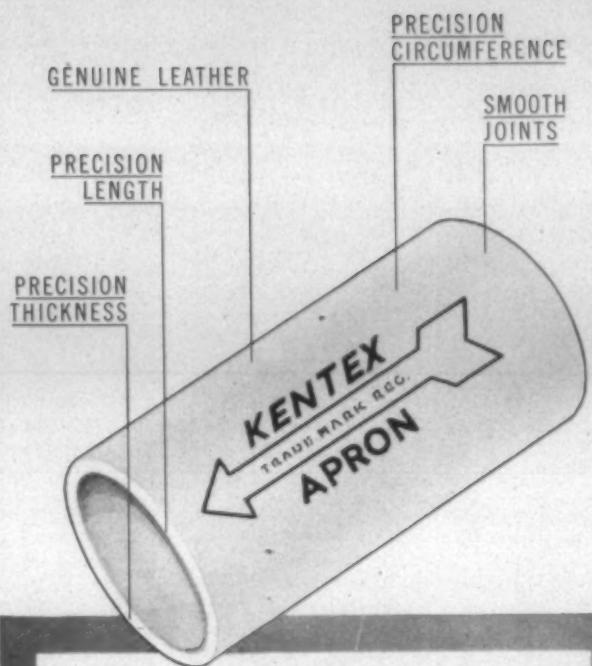
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fibers, and the examining of problems arising out of the present processing procedures and machinery.

When the research engineers have come to a solution of a research problem, the next step would be to design machinery to prove the usefulness of the discovery and build machinery which can be produced and presented to the trade. The question might be a large one concerning an entirely new step or process involving radically new principles or it could be a sharply limited one involving a better type of drafting arrangement for a spinning frame, or an improved device for automatic feeding on a wool card, or the improvement of such a simple device as a thread guide. From these joint efforts of the research and development engineers will come the new models of textile machinery that will keep pace with advancing textile technology.

Testing

Since adequate testing and control laboratories are essential to any research and development program, the operation of these excellently equipped laboratories will expedite and

improve the operation and efficiency of the other divisions, by providing quick testing and analysis to accelerate the solution of problems being studied.

In another way, the testing laboratories will be of direct service to Whitin customers who are interested in making comparative tests to determine the improvement in yarn quality or production that Whitin machinery offers.

Permanent Machinery Exhibit

The machinery installed in the first two floors of the building will afford to customers and interested mill men the unusual and unique opportunity to examine the latest models of all the major Whitin machines. As a display, this exhibit of 53 machines, all in operating condition, is almost unmatched. From time to time, other machines and models will be added, so that its value to the trade will continue to grow.

With the consolidation of the Whitin research and development departments and the improved plant and facilities at their disposal the opportunity to improve textile machinery is obvious. The better Whitin machines are, the better products mills can make on them.

Mill Waste Receptacles

By V. E. OLEMAN

AN OFTEN neglected item in the cotton mill is the waste receptacle. Sometimes any old receptacle that comes to hand is used for this purpose. And often this is only a makeshift and is inadequate for the end-use desired.

Some thought and planning should be given to this factor, since one pound of cotton in every four entering a combed yarn or combed weaving mill goes out the warehouse door as non-reworkable waste. And in the average carded mill one pound in every seven goes out in such a manner.

One of the main features a waste receptacle should have is convenience and accessibility. For if it is easy to put waste up in a convenient place, *always not far away*, better care will be taken of waste by operatives. It has been the writer's experience to have inspected over 50 mills in the interest of waste. One of the greatest faults that mills are guilty of in this matter of waste receptacles is that they have too few. It is far better to have too many waste receptacles than too few, since extras will emphasize the matter of waste and increase their accessibility.

On Page 82 are sketches of nine of the most widely used waste receptacles with a description of each as to construction and use.

Fig. 1 is a sweeping rack made of three-quarter or half-inch galvanized pipe. It is fastened to the floor by screwing floor plates on each leg of the sweeping rack. At the corner of each angle of the top square is a hook that is welded to the pipe and is pointed inwardly. A burlap sack is hung on these hooks and the bag is primarily for receiving floor sweeps, though it may be used for other purposes. When the bag is full or at any time, it can be unhooked and taken to the waste house and a fresh bag hung in its place.

This item saves handling of waste as the sack may be stored in the warehouse and emptied directly in the waste press. Thus the waste is handled only once in detail and that when it is first put in the sack. Some mills bolt tin to the sides of the pipe so as to make a neater appearing job and some go so far as to put casters on the rack to push it around for waste collection purposes.

Fig. 2 is a receptacle for collecting clearer waste at the drawing, sliver lappers, ribbon lappers and fly frames. The receptacle is first made square to differentiate between a round can that is used for good reworkable waste, with the hole in the top diamond-shaped to further emphasize this difference. This is a small item, yet the psychology of the shape of the receptacle and the hole may have a lot to do with preventing the mixed waste that is often found in some mills.

Fig. 3 is a combination seat and waste box for fly frame hands. The back has a rectangular box-shaped affair that holds the clearer waste. The seat part is hinged so that it may be lifted and roving waste put in it for re-working. Being convenient (as the receptacle is a seat also) it will be fully utilized.

Fig. 4 is a movable receptacle for use on the end of a spinning frame. Two hooks are provided on the back for hanging on the frame and for easy removal for emptying when full or at stated intervals.

Fig. 5 is the same type of receptacle as Fig. 4 and is used for the same purpose, but the top is covered and the receptacle is open at the front. The purpose is to prevent overhead cleaners from blowing the waste out and around as it passes over the waste container.

Fig. 6 is a collection box for stick and roving waste, clearer waste and soiled card strips used for cleaning up

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OPENING, PICKING, CARDING & SPINNING

around the spinning frame. It is either hung or bolted on the end of the spinning frame and is covered for use around overhead cleaners.

Fig. 7 is a movable box that has a partition in it dividing it into two parts, one of which is larger than the other. One part (the larger) is for stick and roving waste and the other part (the smaller) is for clearer waste. The lid is removable for emptying. Small holes are cut in the lid (either round or diamond-shaped) for placing the waste into it. It is also used as a seat by spinners and sets at the end of the frames and is about the height of any ordinary chair.

Fig. 8 is a much used type of sweeping box with lid. It is very accessible. A bag may be hung in the interior and renewed as the box comes full and thus facilitates in the handling of the waste.

Fig. 9 is utilized where room is available, and is one of the most convenient and useful receptacles found in any yarn mill. Many types have been devised but the hinged end is about the most convenient. A bin is provided in the waste house for each type of waste (and more if necessary). The waste is collected either loose or in sacks and is rolled over to the press. The end is let down and the contents raked into the press. This receptacle saves a lot of time in the waste house in loading the press and also

prevents scattering and mixing of the waste on the floor. The box is made large enough to hold about one bale of waste and is slatted to make it light. A good caster should be used as quite a bit of weight must be moved; ball-bearing casters are best. Some mills use veneer to build it.

There are many other types of waste receptacles in use more adaptable to some particular end-use, but these described herewith are adaptable to almost any mill for the purpose for which it was designed.

Chemstrand Arranges To Borrow \$110,000,000

Arrangements to borrow \$110,000,000 from institutional investors have been made to finance construction of factories for the Chemstrand Corp., a company jointly owned by Monsanto Chemical Co. and American Viscose Corp., Osborne Bezanson, Chemstrand president, announced April 11 in Philadelphia, Pa. The plants will manufacture a new synthetic acrylic fiber and will process and manufacture nylon. The financing was arranged by Morgan Stanley & Co., and Dillon, Read & Co., Inc., and is subject to the completion of arrangements between Chemstrand and E. I. du Pont de Nemours & Co., covering the manufacture of nylon. Chemstrand will be the first company other than Du Pont to manufacture nylon in the United States. Decatur, Ala., is the site for the first Chemstrand plant. Locations for additional plants are under consideration.

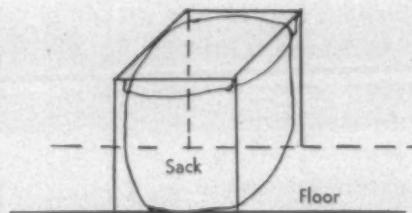


Fig. 1 - Sweeping Rack

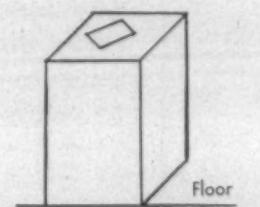


Fig. 2 - Clearer Waste Box

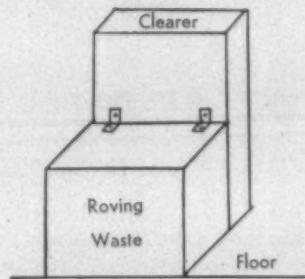


Fig. 3 - Frame Hand Waste Box & Seat

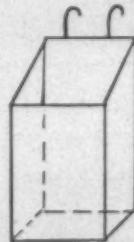


Fig. 4 - Stick & Roving Waste Box for Spinning to Hang on Frame

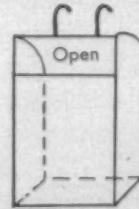


Fig. 5 - Spinning Waste Box for Overhead Cleaners

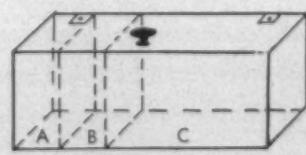


Fig. 6 - Spinning Waste Box to be fastened to end of Frame

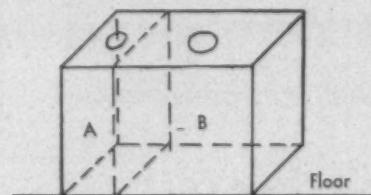


Fig. 7 - Combination Seat & Waste Box for Spinners

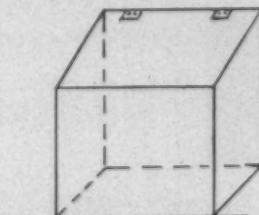
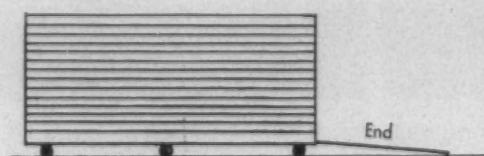
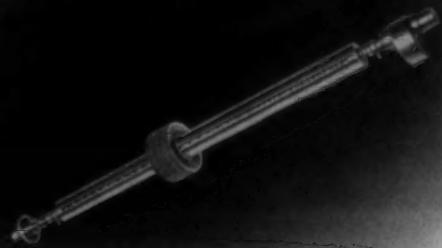


Fig. 8 - Sweeping Box for All Departments



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Prompt Delivery



Unit in operation for over one year in unit of one of country's largest chain of mills.

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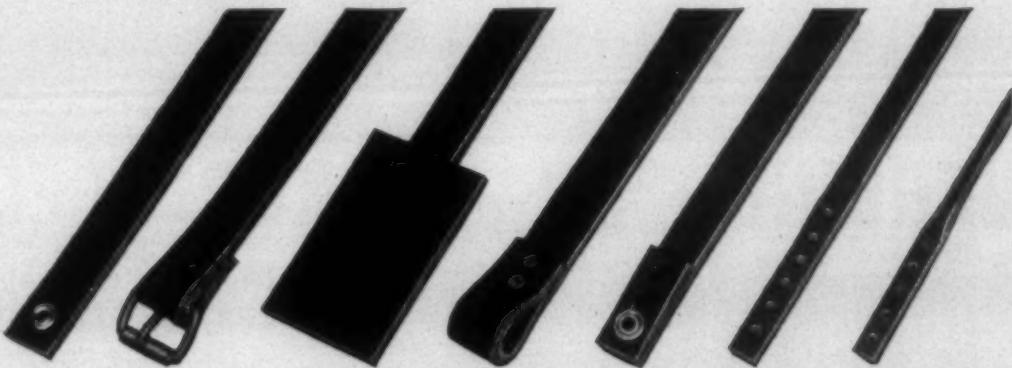
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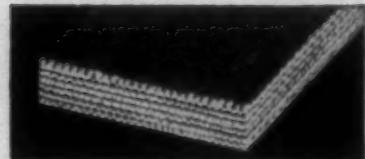
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Warp Preparation & Weaving

— A Review of the Literature —

Cotton Yarn Sizing Materials, Preparation and Practices

By W. E. SHINN, C. BOYCE SINK and MARY E. PARKER, North Carolina State College School of Textiles

Part Three — Sizing Practices

IN OUR search for literature pertaining to cotton yarn sizing materials, preparation and practices, it was found that there are few books of reference and that most of the material available is in the form of magazine articles. The available references were reviewed and are summarized in this report, work for which was done under contract with the United States Department of Agriculture and authorized by the Research and Marketing Act. The contract is being supervised by the Southern Regional Research Laboratory of the Bureau of Agricultural and Industrial Chemistry. References (superior numerals) are listed at the end of this installment.

The first installment of this report (Jan., 1951, issue of *TEXTILE BULLETIN*) discussed sizing materials. The second installment (February issue) covered size preparation.

In a paper presented to the Textile Research Institute, Sanders²⁰ pointed out why varying performances might be expected of the same size at different mills. "There are eight major groups of variables involved in slashing, and they comprise from two up to 17 variables per group, or a total of 54 variables. It is obvious that it would be almost impossible to find two mills in which all 54 variables are identical." Among the variables listed are water, size, size box, yarn, slasher, atmospheric conditions, and time elements.

Hart⁶ found that, "In tests made with different proportions of starch, the breaking strength of two lots of sized yarn was found to be 31 per cent and 34 per cent, respectively, greater than that of the unsized yarn. . . ."

Size Concentration

Hudson⁷ reviews some of the causes of variation in added size. He attributed the dilution of size to leaky valves or coils, undue condensation from excessively wet steam, carelessness in washing down squeeze roll, excessive mechanical agitation and long periods of high temperature, the incorrect measuring of initial make-up water and additional water after cooking, and to improper covering on squeeze rolls and improper cooking of size.

Considerable variation in size can also be caused by the incorrect height of size in size box. The use of certain

materials in the size mix may cause a thinning of the size.

Seydel¹⁸ found that fresh size at 200° F. gives the best sizing results. "If a certain viscosity is desirable in the size box, it is better to keep the size near the boiling point and use more starch to obtain this desired viscosity than to cause thickening by keeping the size around 175° F. The film will be superior. It is generally conceded that it is better to use a more concentrated size at 200 to 250° F. than to use a less concentrated size with the same viscosity at about 170° F."

Effect of Stretch

Shinn and Biggers²⁰ conducted some experiments in the sizing of 30s spun rayon yarns in which the effect of slasher stretch on yarn properties was studied. The yarns were subjected to stretching, varying from approximately one per cent up to 14 per cent. At 14 per cent, considerable end breakage was experienced. The yarn tensile strength was improved with stretches of 12 per cent or less. The highest tensile strength in sized yarn was experienced in yarns stretched 12 per cent.

Residual elongation, however, was reduced by stretching. For each one per cent stretch in slashing, there was a corresponding loss of approximately 0.5 per cent in residual elongation. The warps which were stretched the greatest amount did not weave well because of the low residual elongation.

Hart⁶ reports that "Because of the nature of starch, it will reduce the elasticity of the yarn; nevertheless the mill should endeavor to retain as much elasticity as possible in the sized warp. A yarn with a reasonable amount of stretch will give much better results on the looms than one with practically no elasticity and greater strength. A good sizing starch should reduce the elasticity of a yarn not more than 20 or 25 per cent. . . . thus, yarns between 60s and 80s have an elasticity of 3.5 to 3.8 per cent. . . ."

"In the case of cotton, surprising results have been achieved by uniformly controlled stretch at approximately one per cent. The natural gray yarn has a stretch of only six per cent to seven per cent at the breaking load, and some cotton slashers in operation today actually take out

as much as three per cent stretch, or approximately one-half. This is sufficient to seriously weaken the yarn, particularly where the maximum stretching occurs at places that are already thin as the yarn enters the slasher. In many cases, slasher speeds have been limited by the factor of excessive or irregular stretching. Warps were made with zero stretch, but under this condition the yarn comes off the slasher slack, and it is impossible to attain high speeds due to the poor splitting at the lease bars. However, it was found that there is practically no difference in loom efficiencies between warps having zero stretch and one per cent, but beyond one per cent the efficiencies drop very quickly.

"There has recently been put on the market a device for controlling the stretch of yarn on the slasher. . . ."

Temperature

Seydel¹⁶ states that the ideal temperature for drying a warp was found to be 215° F. "The lower the temperature at which the warp is dried, the stronger and the more elastic it will be, other things being equal."

Hart⁶ states that "Drying at a high temperature lowers the hygroscopic capacities of both cotton and starch. It is stated that drying at the temperature of boiling water decreases the strength of unsized yarn about two per cent. It is presumed, although not fully established by test at the time of writing, that over-drying will aggravate the brittleness of sized yarns. It is a well-known fact that the size-film of a warp, dried to a state where there is a deficiency of moisture, has lost the greater part of its elasticity, with the result that in weaving not only will its weakness cause excessive breakage, but there will be a good deal of shedding. Excessive baking will usually cause scales like small dandruff to drop on the floor of the weave room, as well as considerable shedding of small fibers. A practice that causes trouble is the occasional stoppage of the slasher, for one reason or another, with the result that 20 to 40 yards of warp become dried to an extent where the weaving properties of the yarn are greatly damaged."

Penetration

On size penetration, Hart⁶ says, "The penetrating power of size into the yarn depends upon many factors, such as the temperature of sizing, concentration and viscosity of the starch-paste, twist and construction of the yarn, the speed of the slasher, amount of immersion of the yarn in the size-bath, the weight and condition of the squeeze-rolls, and the rate and method of drying. The penetration is greater the higher the degree of dispersions of the starch in the size and the lower the viscosity of the sizing mixture.

"It is claimed that penetration is only desirable to the extent sufficient to favor a good anchorage of the film around the warp, rather than to make a rod-like brittle warp, which would lack resiliency and elasticity. The aims of the sizing process should be to paste down the fibers protruding from the body of the unsized yarn; to fill the valleys on the surface of the yarn; to form a tough, elastic, flexible film around the yarn; and for the film to penetrate far enough towards the center to be well anchored.

. . . The much-sought-after quality of elasticity is probably not present in a yarn in which size has penetrated to the very core and surrounded every fiber, while it could well be present where the yarn is merely coated with the size. On the other hand, it is stated that the size must penetrate sufficiently or the size will shed."

"Penetrating and coating properties of starch-pastes depend on the viscosity and temperature of the pastes, and upon the pressure exerted on the sized yarn by the squeeze rolls. The viscosity of the starch-paste is determined in a general way by the size of the swollen starch-granules. Starch-pastes with small granules give good penetration; on the other hand, those with large granules possess good coating properties. The penetrating power of starches seems to follow the order of rice, wheat, corn, and potato, with potato starch showing the least penetration. Potato starch also does not seem to adhere well to cotton yarn and scarcely coats at all, probably due to the fact that the swollen granules are very large. . . ."

Seydel,¹⁸ in an address before the South Carolina Division of the Southern Textile Association at Greenville, S. C., stated that "A good warp size, well handled on the slasher, should give increased tensile strength, flexibility, elasticity, good fiber-lay, smooth size film and hygroscopicity to the yarn. . . ." To get these desired properties, the size compound should contain gums, lubricants, softeners, but the properties of these materials should be properly balanced. An increase in one property should not be made at the expense of other important properties.

"Gums added to a size can greatly affect its elasticity and flexibility. . . ." However, excess of penetration will decrease the elasticity of the yarn and excess of flexibility materials will result in a soft warp.

Moisture Content

"Hygroscopicity is a quality that is desirable to a certain extent. . . ." It gives increased strength and flexibility due to the extra moisture in the yarn. However, this property in excess will result in a soft warp.

The addition of a chloride seems to give flexibility. Perhaps due to the water-attracting power of the chlorides. Care should be taken when magnesium chlorides are used because they are less stable at higher temperatures. Calcium and zinc chlorides are stable at higher temperatures. Calcium and zinc chlorides are stable at greater temperatures.

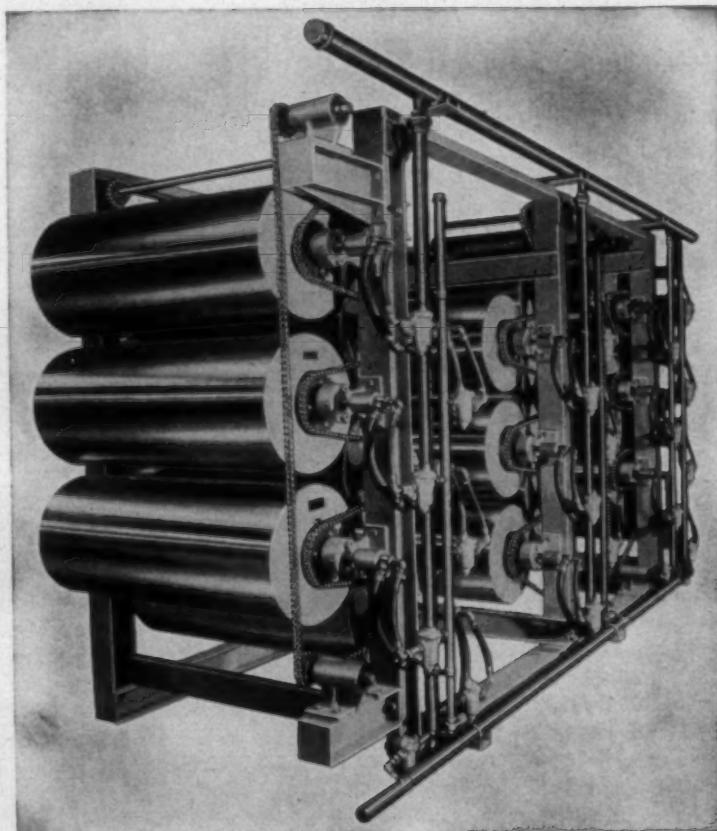
Discussing the effect of humidity, Hart⁶ states that "The greatest strength of sized yarn is reached at about 70 to 80 per cent relative humidity. Above that, it falls off about ten per cent up to the state of wetness, on account of loss of strength of the softened starch. Sizing decreases the extensibility under dry conditions but the extensibility is rapidly regained with increasing humidity. At saturation it approximately equals that of the unsized yarn."

Seydel¹⁶ considers eight per cent to be the ideal moisture content for good sizing. This percentage refers to the moisture content as the warp comes off the slasher.

The Moist-O-Graph⁸ is a slasher control instrument. The control of amount of moisture in sized cotton yarns leaving the slasher is made possible by the installation of a Moist-O-Graph on the slasher. This instrument is sensitive to the efficiency of the warp yarn as a conductor of electric current. If the percentage of moisture remaining in the yarn is high, more current is carried by the ends of warp. This causes the machine (Continued on Page 90)

ANOTHER EXAMPLE OF FINE CRAFTSMANSHIP

Complete Dryers by *The Textile Shops*



Complete contact (Dry Can) drying equipment designed for your particular needs.

Illustrated is a small dryer which consists of 23-inch diameter by 60-inch face length polished stainless steel cans to operate at 35 psig., steel plate sprocket and roller chain drive, rotary steam joints, traps and piping, frame, etc.

We are equipped to build new and repair all types and sizes of drying cylinders for pressures to 150 psig.; ASME Code Construction if required.

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Draper Corp. President Reports To Stockholders

Thomas H. West, president of the Draper Corp. at Hopedale, Mass., reported to stockholders this month that demand for looms has never been greater and that the company has firm orders which could carry through 1952 if full production was maintained. But Mr. West added: "It became clear, however, near the end of the last year both that materials for complete looms in quantities such as we had been producing would probably not be forthcoming, and also that our capacity, at least in part, was required more directly in the country's defense effort." Thus, he adds, loom deliveries have been rescheduled beginning this month so that by the end of 1951 it is expected that complete loom production will be at a rate substantially below peak capacity.

Draper manufactured machine tools during the past war, and production of such tools is again the most critical factor in the country's mobilization plan, Mr. West points out. Thus, he adds, the company has naturally turned to that field to take up the slack brought about by the curtailed loom program.

In December, the company contracted with Bryant Chucking Grinder Co. of Springfield, Vt., to build complete internal grinders. Deliveries of these machines, vitally needed in tent and airplane programs, will begin on a limited scale early this Summer. Negotiations also are being carried on to do similar sub-contracting for other machine tool concerns. In addition, the plant has been surveyed by Army Ordnance and it is possible the company will be called to participate in gun or ammunition programs at a later date. Continued Mr. West: "The disruption of changing over a considerable part of our plant to products other than those we usually manufacture is bound to be costly. Furthermore, it is nearly impossible to secure at the desired time and in a volume that will exactly compensate for reductions in production of our regular lines. These considerations, plus the prospect of increasingly heavy Federal and State taxes, can only add up to a picture of our earnings in 1951 that appears cloudy."

On the other hand, he said, the company expects to receive priorities for materials that will enable it to maintain at record rate the production of

loom repair parts, bobbins and shuttles.

The prospect of an unprecedented demand for complete looms after the present emergency are bright, Mr. West says. Export sales were maintained at a very satisfactory rate, in spite of increasingly stiff competition, he reports.

"Because of continued rapid expansion of the textile industry in the South, the demand for repair and maintenance parts for our machinery in that section has continued to grow steadily. In order to provide better service to our Southern customers, additions to both our East Spartanburg plant and Spartanburg warehouse were authorized, and these additions are now nearly completed.

"The total cost of these operations and improvements will amount to nearly two million dollars and will approximately double the capacity of the Spartanburg plant. We hope that in spite of present uncertain conditions, this work can all be completed in 1951. In Hopedale, a considerable work has been done on the construction of a central steel storage building which has also been under study for several years. Completion of this building at a cost of more than \$500,000 is scheduled for the middle of 1951."

Oakite Report Describes Reed-Cleaning Procedure

How a new reed-cleaning procedure removes oil, grease, dye, sizing, weave room dirt and rust from loom reeds in one operation, is described in a special service report recently issued by Oakite Products, Inc., New York, manufacturer of industrial cleaning and allied materials. According to the report, this simplified reed-cleaning method merely calls for manual brushing of reeds with Oakite Compound No. 36, a mildly-acidic material that simultaneously removes soil and rust deposits from reeds in minimum time. A special anti-rust treatment designed to protect newly-cleaned reeds from rust while they are in storage awaiting re-use, also is described in the Oakite report. In addition to an interesting description of this manual reed-cleaning procedure, the service report also provides helpful data on specialized material and methods for machine cleaning of reeds. Readers desiring free copies of this service report should address Oakite Products, Inc., 157 Thames Street, New York 6, N. Y.

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WARP PREPARATION & WEAVING

(Continued from Page 86) speed to be retarded slightly, giving a correspondingly greater drying time on the cylinders. This serves to reduce the moisture content to a predetermined amount.

Gulledge⁵ made a study to determine the weaving qualities of cotton yarns sized with different starches and sizing compounds. A comparative test was made on two starches, and it was found that a starch consisting of 225 pounds thin-boiling starch, 13 pounds emulsified tallow and 22 pounds locust bean gum produced better over-all results. This mix was brought to a boil in 30 minutes and boiled for one hour, making 197 gallons of size.

Kettle temperature	206° F.
Size box temperature	208° F.
Kettle viscosity	28 sec.
Slasher speed	29 yds./min.
Av. per cent of size	10.66

Temp. and relative humidity in weave room—82°F.—88%

Four sizing compounds were tested and the following mix was considered best: 230 pounds thin-boiling starch and 26 pounds Compound A (pH 5.5, saponifiable 37.1%, unsaponifiable 29.7%, total fatty matter 66.8%, chlorides as CaCl_2 —none, Starch—none).

Kettle temperature	204° F.
Size box temperature	207° F.
Kettle viscosity	27 sec.
Slasher speed	28 yds./min.
Av. per cent of size	9.75

Squeeze Rolls

The important role that the squeeze roll plays in the amount of size the yarn contains was pointed out. New coverings give greater size content to yarn. The squeeze roll coverings should be watched carefully and the coverings changed as often as necessary.

The weight applied on the squeeze rolls varies with the difference in yarn requirements of various mills. The general trend is toward a heavier squeeze roll. This seems to dress the yarn better; however, size is squeezed off resulting in less size content. ". . . Low steam pressure on the cylinders increased yarn strength and elongation, but at the same time penalized production, so it is a matter of which is more important. We have found that the steam pressure on the cylinders can be reduced from 12 to nine pounds with the loss of only two to three yards per minute in slasher speed." The correct amount of moisture in the warp was obtained by moisture controls on the slasher.

A study was made on starches and sizing produced by several companies. A study was made also using different formulas.

Sax¹⁵ reports that ". . . It is particularly interesting to see that the sized yarn obeys Hooke's law somewhat better and no sudden yielding occurs, whereas the unsized yarn shows considerable plastic flow. Therefore the irregular stress applied to sized yarn does not harm this yarn as much as it would if tension were applied to the unprotected yarn. If sized yarn is stretched it goes back reasonably to its original form within the elastic limit. Particularly the sized yarn does not yield suddenly and irregularly as does the unsized yarn. . . .

". . . One of the physical characteristics of good size is to have sufficient inherent resiliency as to build together with the yarn a semi-elastic structure without sudden yield

points, . . . and to counteract the elastic flow of the individual fibers within the limits given by reason of production machinery constants."

In the summary report of the Textile Research Institute warp sizing research program,²⁷ the following recommendations and conclusions were made:

- (1) Further work should be carried out in studying the relationship of abrasion resistance and weaving efficiency.
- (2) Further work should be undertaken on the use of modified corn starch in connection with various proportions of softeners and water-soluble plastics.
- (3) Recommendations 1 and 2 should be carried out with long weaving tests to eliminate the effect of variation of normal size application and other uncontrolled influences.
- (4) Methods of preparing sizing formulas to give greater bulk and covering power without too much increase in weight should be studied.
- (5) Additional study should be given to the use of water-soluble synthetic resins such as sodium polyacrylate, methyl cellulose, and sodium cellulose glycolate.
- (6) The industry should adopt a standard viscosity test and a standard unit of expressing viscosity.
- (7) All labels and descriptive matter relating to sizing materials should express the viscosity of the product described in these standard units.
- (8) Attention should be given to methods of drying the warp threads individually without contact with one another.

Conclusions

- (1) Low soluble gums were the most satisfactory as the chief adhesive substances in sizing spun viscose warps.
- (2) The addition of water-soluble synthetics improve weaving quality without loss of abrasion resistance.
- (3) Size mixtures should possess sufficient body to cause a protective film to form on the yarn surface. This protection has been found to reduce shedding of surface fiber in weaving.
- (4) High-soluble dextrans alone do not furnish necessary protection to prevent shedding. If they are used, an adhesive furnishing more body should be added. The viscosity should be 2.5 to 6.5 relative to water at 80° C.
- (5) High-soluble dextrans produce a soft fabric and are easily removed. In certain easy weaves their use may be advisable.
- (6) A stretch of 2.5 per cent is considered sufficient in slashing. Good weaving may follow with a stretch as great as five per cent, with a small improvement in tensile strength, but beyond this point residual elongation is reduced and end breakage increases.

(7) Residual elongation is the property which enables the warp to withstand shock and unusual stresses encountered in the loom, such as interference from knots in adjacent ends, or broken ends during the interval between breakage and functioning of the warp stop motion.

(8) Abrasion resistance was improved through application of all sizing agents. The lowest durability factor (1.8) was observed for a high-soluble dextrin, the highest (7.4) for methyl cellulose. The results were not consistent enough to form clear-cut classifications but in the intermediate group were corn and tapioca gums, thin-boiling starches and a thick-boiling starch.

(9) The addition of oils and fats as softeners to a starch or gum size paste lowers the abrasion resistance below that obtained by use of the starch or gum alone.

(10) No consistent correlation was found between abra-

sion resistance and weaving performance although the highest weaving efficiency was obtained from a warp having the highest rating in abrasion resistance. The addition of softeners frequently lowered the abrasion resistance but improved weaving efficiency. However, it is known that there is a minimum abrasion resistance which must be maintained for a given construction. This value is the average abrasion caused by weaving plus a reasonable margin of safety. Above this margin abrasion resistance is of no value and may be detrimental, especially if it is attained at the expense of other properties such as flexibility or ultimate elongation.

(11) Abrasion studies on unsized and sized rayon staple yarns indicate that their transverse stability is not in proportion to their relatively high tensile properties. Resistance to shearing and torsion are probably lower than is the case in the natural fibers.

(12) Tensile strength of sized yarns was in a majority of cases greater than that of unsized yarn.

(13) Residual elongation in the sized warp was approximately 67 per cent of initial elongation in the unsized yarn. Variations in ultimate elongation did not appear to be influenced by the type of sizing agent used, except that the addition of an excess of softening agent increased the ultimate elongation.

(14) Enzyme removal was necessary for complete elimination of the size where starches and gums were used. High-soluble dextrans and a considerable portion of the gums were removed by hot water alone. A size not removed by hot water alone could not be completely removed in one per cent soap solution at the same temperature.

(15) One per cent enzyme (Exsize) at 60° C. removed all starches in one hour.

(16) A fabric sized with starch ether gum was satisfactorily dyed with a direct dyestuff with no attempt at removal of the size (simultaneous dyeing and desizing).

(17) When starch and glue are combined in a size mixture they may penetrate independently of each other.

(18) There is no consistent correlation between viscosity and size pick-up; however, the highest pick-up was obtained by use of the most fluid size. A dextrin with a viscosity of one (equal to that of water) gave a size pick-up of 21.7 per cent. A corn gum likewise equal in consistency to water gave a pick-up of 20 per cent.

(19) Where it is desired to add considerable weight

in sizing, the use of dextrin as one of the components in a size mixture will accomplish this with a minimum increase in stiffness.

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SO YOU WANT GOOD CLOTH!

By FRANK D. HERRING

Part 23 — Care of the Shuttle

THE shuttle could well be called the heart of the loom. Under the most favorable conditions the shuttle must take severe punishment while the loom is in operation. A very high percentage of the loom stops and imperfections in the cloth is a direct result from bad shuttles, or improper care of the shuttles. They are the most expen-

sive of all the loom accessories, and all this adds up to the fact that they should be given the proper care and attention, and of course this care and attention should begin when a new shuttle is put into the loom. If the proper adjustments are made when the new shuttle is put in the loom, very little trouble will be experienced with the

WARP PREPARATION & WEAVING

shuttle thereafter. I have used the following system with very satisfactory results. First, have some forms printed with the following entries:

SHUTTLE TICKET		
Room No.	Date	Loom No.
Rocker shaft	Section No.	Swords
Parallels	Collars	Picker stick
Front box plate	Parallel shoes	Binder studs
Lay end plates	Back binders	Back box plates
Frogs	Reed	Protector rod
Brake	Protector rods	Fingers
Pickers	Frog	Dagger stop leather
Timing of pick	Lip	Stroke on picker stick
Harness timing	Lug strap hangers	Harness setting
Shuttle bristles	Crank arms	Transferrer
Loom fixer	Filling feeler	
	Etc.	Overseer
	Checker	

The supply clerk should give the loom fixer, or whoever puts in the new shuttles, one of the above tickets when he issues a new shuttle. The fixer should check off the above entries and then turn the ticket over to whoever is designated to approve his work, and then the checker should turn the ticket over to the overseer. The overseer should have a place to file these tickets in order so that he can determine at any time what section or looms are using excessive shuttles. At first sight, when looking over the entries on the ticket the fixer will probably get the impression that it is a pretty big order, that is the usual reaction, but if he will study the entries thoughtfully and fairly I think that he will be forced to admit that any of the things mentioned can shorten or prolong the usable life of the shuttle. And if this work is done consistently, every time a new shuttle is put in the loom, there will not be too much for the fixer to do after all, because the looms will be kept in good condition. A big part of this check will be merely preventive loom fixing, and that is good loom fixing. The fixer will find it to his advantage and convenience to check the entries on the shuttle ticket across from left to right in the order named. The following are my reasons why.

The rocker shaft—For a number of reasons, a loom should not be allowed to run with excessive lost motion in the rocker shaft. This excessive lost motion will cause the loom to slam off, and this will sometimes cause the shuttle to be trapped and broken, or damaged beyond repair. This lost motion will also interfere with the proper functioning of the transfer mechanism and this will cause bobbins to be trapped by the shuttle and sometimes damage it. There are other reasons, but I think the ones mentioned are sufficient to justify the checking and the fixing thereof.

Rocker shaft collars—The purpose of the rocker shaft collars is to secure the rocker shaft in a fixed position and prevent lengthwise play in the shaft, and they should always be in place, and tight. They should be placed up against the inside ends of the rocker shaft boxes. Lengthwise play in the rocker shaft will cause faulty transfers resulting in trapped bobbins, broken shuttles and sometimes broken battery and lay parts, etc.

Swords—If one, or both swords are loose on the rocker

shaft the same troubles will be encountered as the ones mentioned above, as this will allow excessive lengthwise play of the lay. Loose swords will cause many other troubles also, which will be mentioned later in this series.

The parallels—The entire parallel assembly should be carefully checked. If the parallel, parallel tongue, or parallel plugs are excessively worn they should be replaced, because excessive wear on either one of them will cause the loom to slam off, and sometimes throw the shuttle out of the loom and damage it beyond repair. If the heel spring or spring strap, which are mounted on the parallel, is broken or too loose it will cause the loom to slam off and this also will sometimes throw the shuttle out of the loom. The parallels should be securely tightened in place up against the outside ends of the rocker shaft boxes, as they act as an aid in preventing lengthwise play in the rocker shaft. When the parallels are tightened the fixer should also tighten the rocker shaft boxes. When the fixer is working on any part of the loom it is good practice for him to form the habit of tightening adjacent parts in the vicinity where he is working. This is preventive loom fixing and will save him many jobs, and probably breakdowns in the future.

Parallel shoes—If the parallel shoes are excessively worn it is impossible for the fixer to parallel the pickers properly, and this will cause excessive wear on the shuttle and will sometimes throw the shuttle out of the loom. The shoes always wear on the back, outside, tip end, at the point where they rest on the parallel when the picker stick is back in rest position. If the parallel shoe is excessively worn at this point it will allow the picker to drop down lower than the mechanism was designed for it to run, and if the picker is paralleled in line with the shuttle spur at this point it will be too high in relation to the spur at the end of the forward stroke of the picker stick, and this will force the back top side of the shuttle up against the bottom of the back box plate and create excessive wear on the shuttle, etc.

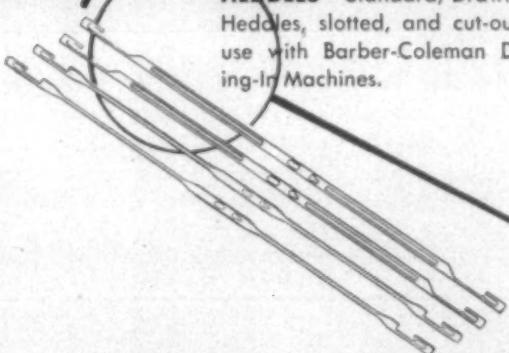
Picker sticks—If the picker stick or sticks are excessively worn they should be replaced, because this will allow too much give, or spring in the stick which will reduce the power and prevent the straight throw of the shuttle and cause the loom to slam off and sometimes throw the shuttle out of the loom.

Front box plates—The leather coverings on the front box plates should be replaced if they are even slightly worn before a new shuttle is put in the loom. Sometimes the worn condition of the old shuttle, which is being replaced, will have worn the binder leather unevenly, and if a new shuttle is used with this type binder the shuttle will have a tendency to either rise up or be pressed down in the shuttle box. If the shuttle rises in the box it will be worn on the top back side by contacting the bottom side of the back box plate, and if it is inclined downward it will be worn by excessive pressure against the lay end plate. The front box plates should be squared in relation to the lay end plate. It is just as important to square the front box plates as it is to square the reed and back box plate. All front box plates have filing lugs on the bottom at the points where they contact the lay end plates and they can easily be squared with a reed square. If the front box plates are not squared the shuttle will be delivered from the box in a tilted position, and this will cause the shuttle to be worn on either the top or bottom of the back

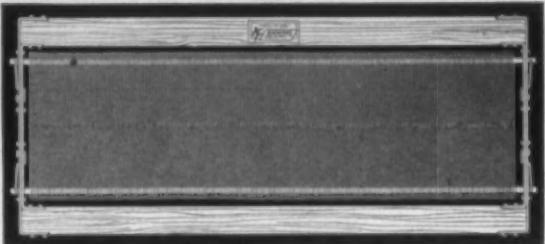


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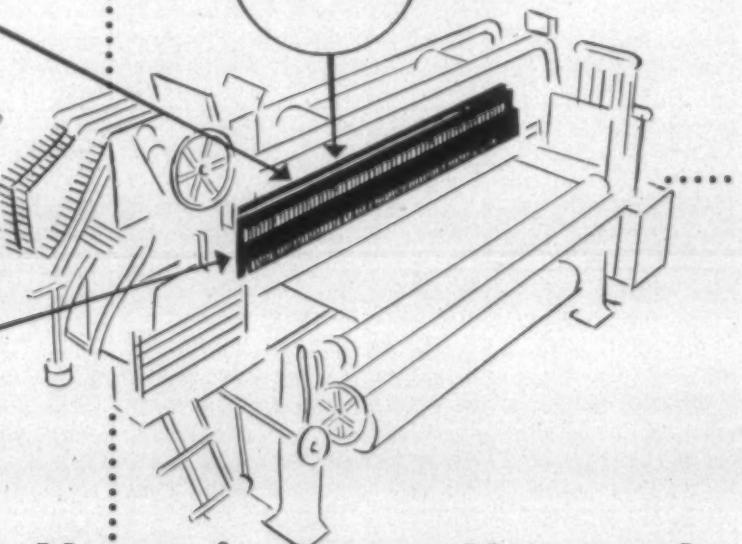
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wall where it contacts the reed, and it will also prevent the shuttle from boxing properly in the opposite shuttle box.

Back binders—If leather coverings on the back binders are excessively worn they should be replaced or recovered, as this condition will cause the same troubles as the ones mentioned above relative to the front box plates.

Binder studs—If the binder studs, or binder bushings are worn enough to allow any lost motion of the binder they should be replaced, as this condition will prevent the proper boxing of the shuttle and will cause the loom to slam off.

Lay end plates—The lay end plates should be in perfect alignment with the race plate, or shuttle race; this is vitally important. They should be lined in relation with the race plate with a straight edge not less than 24 inches long, and they should be securely tightened. If the lay end plates are not in perfect line with the race plate the shuttle will rise when entering and also when leaving the box, and this creates a very bad condition, causing excessive wear on the shuttle and numerous unnecessary loom stops by slamming off, throwing the shuttle out and excessive breakage of the warp yarn. The lay end straps should be in place at all times, as this leather strap acts as a stop, and cushion, and prevents wear on the picker stick. Allowance is made when the lay is positioned and the battery gauged for this lay end strap being in place in the end of the lay, and if it is not in place the shuttle will be allowed to go too deep into the shuttle box and fail to be in the right position to receive the ingoing bobbin on the transfer, resulting in faulty transfer and sometimes burst shuttle and other broken parts.

The Reed—The reed should be checked very carefully. If it has protruding dents or end bars they should be repaired, and if not possible to repair them the reed should be replaced by one in good condition. The reed should be checked with a reed square to determine if it is in square position in relation to the race plate. Protruding dents in the reed, or the reed not being squared properly will prevent the straight passage of the shuttle as it will be deflected from its course and cause the loom to slam off, and also sometimes throw the shuttle out of the loom, and of course will create unnecessary wear on the shuttle.

Back box plates—The back box plates should be in perfect alignment with the reed, and this lining should be done with a straight edge not less than 24 inches long. If the back box plates are not in line with the reed the shuttle will be deflected from its straight passage across the lay, and this will cause unnecessary wear on the shuttle, and prevent it from boxing correctly and will sometimes throw the shuttle out of the loom. All sharp edges on the back box plate where the shuttle is likely to contact it should be rounded and polished thoroughly as this will wear the shuttle. (The back box plates should always be lined AFTER the reed has been squared with the race plate). There are several types of back box plates for the different model looms. It has been my experience that the two-piece, leather-covered plates are the most satisfactory and economical ones to use. The leather covering will prevent much wear on the shuttle and the cost of replacing the leather covering is insignificant compared to the cost of the shuttle.

Frogs—The frogs should be checked when a new shuttle is put in the loom, to determine if they have sufficient packing in them, and to see if the frog pieces, or steels are in good condition. To check the packing proceed as follows: place the shuttle about middle way on the lay between the warp sheds and then turn the lay forward until the protector rod daggers are in contact with the frog steels. In this position the reed should be stopped the width of the shuttle plus a half-inch back from the beat of the cloth. This will prevent the breaking out of the warp yarn when the loom slams off and traps the shuttle between the sheds and also will sometimes prevent the shuttle from being burst or damaged beyond repair. If the frog steels are chipped off or worn rounded they should be replaced, because if the daggers slip over the frog steels when the loom slams off the same things could happen as mentioned above.

Protector rods—If the protector rods or the protector rod bearings are excessively worn it is impossible to box the shuttle properly and this will cause the loom to slam off and throw the shuttle out of the loom.

Protector rod fingers—If the fingers are not set properly it will cause the same troubles as mentioned above relating to worn protector rods.

Brake—The brake is a very important part of the loom, and as a rule they are neglected. They do not require attention very often but they should be checked at certain intervals, and it is a good rule to have them checked when a new shuttle is put in the loom. If the packing in the frogs is replenished it will throw the brake settings out of adjustment, and if the frogs and the brakes are checked and proper adjustments made when the shuttle is put in they will be kept in good condition at all times.

Frog lip—The frog lip, the frog, and brake are so closely interrelated that they should all be checked and proper adjustments made on all three when either one of them is changed in any way.

Dagger stop leather—New leather should be put on the dagger stop when a new shuttle is put in. If this is done they will be kept in good condition at all times. The leather should be cut $1\frac{1}{2}$ by $9\frac{1}{2}$ inches with bolt holes punched near each end, then fold them and put them on double thickness. This will provide a cushion between the dagger and dagger stop and will be a big help in boxing and holding the shuttle, and this will greatly reduce slam offs.

Pickers—It has been my experience that more wear on the shuttle is caused by the way the pickers are put on the stick than from any other one thing. It is necessary for the picker to be a tight driving wedge fit on the picker stick, then it is further secured to the stick by a small wood screw. Almost invariably the fixer will drive the picker down too low and secure it there with the screw. This creates a very bad condition, as shown in Fig. 67. When the picker is too low the shuttle will be drawn down, on the end near the picker, tight against the lay end plate, and the top edges of the picker stick slot in the lay end will wear both sides of the shuttle on the bottom side at this point of contact. The pickers should be paralleled in such a way as to receive and deliver the shuttle with the shuttle resting flat, its full length, on the lay end plate.

If the picker is too low, as shown in Fig. 67, it will not only wear the bottom of the shuttle, but the shuttle

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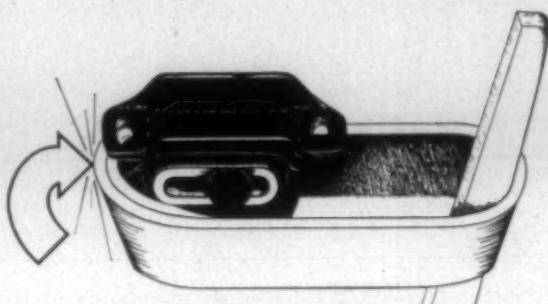
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will be delivered from the box with the first outgoing end inclined upwards, and this will cause the top of the shuttle to strike the bottom of the back box plate on the opposite box and wear the shuttle on top. Another bad feature about the shuttle being delivered with the end inclined upward is that it will be thrown up against the top shed of the warp yarn and cause unnecessary breakage of the warp yarn and will sometimes penetrate the top shed and be thrown out of the loom. If the picker is too low at the end of the forward stroke when the shuttle is delivered, it will cause the first outgoing end of the shuttle to be inclined upward, and the same troubles will be encountered as mentioned above. When the shuttle is delivered from the picker on the pick, the shuttle should be resting flat on the lay end plate, and also square against the back box plate. If this is not true, the shuttle will not travel across the lay to the opposite box on a straight course, and if it does not travel on a straight course it will slap and rattle when it enters the box. This slapping noise is caused by the shuttle striking either the front box plate or the top of the back box plate, and of course this will wear the shuttle and also the leather covering on the box plates. A number of things can cause this condition, but the thing which causes most of it is the shuttle knurl being out of line with the hole in the picker when the shuttle is delivered on the pick.

Fig. 68 shows the picker at the extreme end of its delivery stroke. This is the point where the shuttle leaves the picker. It will be noted that the picker stick is drawn against the back side of the picker stick slot in the lay, and of course this draws the picker towards the back of the lay, and this will depress the shuttle knurl which is in contact with the picker and the front outgoing end of the shuttle is inclined outward away from the reed line which it should follow, and it can readily be seen that it is impossible for the shuttle to follow a straight course across the lay, but will be thrown against the front end of the front box plate on the opposite end, or thrown entirely out of the loom. This not only wears the shuttle, and very fast, but also beats out the leather coverings in the front box

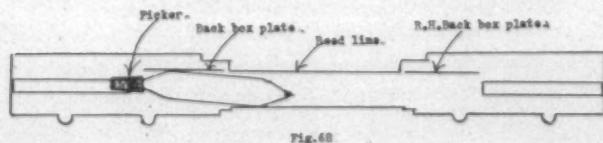


Fig. 68.

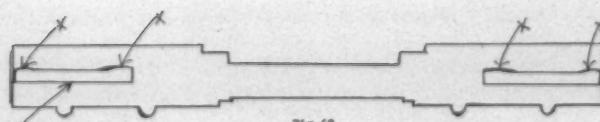


Fig. 69.

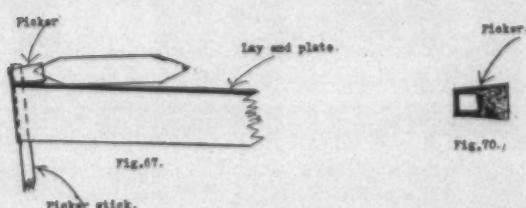


Fig. 70.

plates, and will also cause excessive warp yarn breakage. The picker stick is always drawn back against the back side of the picker stick slot in the lay at both ends of its stroke. This is caused by the picker stick contacting, and sliding on, the check strap.

Fig. 69 shows the outline of the lay, looking downward, and points indicated by "X" marks shows the worn places in the picker stick slots. The longer the looms have been running, the more pronounced these worn places will be. The way to overcome this trouble is to trim the picker out, with pocket knife, as shown in Fig. 70. It will be noted that the part of the picker which contacts the square front side of the picker stick has been cut beveled towards the front, and this will draw the picker towards the front when it is driven onto the stick, and this will put the center of the hole in the picker in line with the tip of the shuttle knurl at the end of the forward delivery stroke. This will deliver the shuttle on a straight line with the shuttle resting back against the back box plate, and if the reed is in line with the back box plates it will be delivered into the opposite box correctly and noiselessly. Even on new looms I have found it necessary to trim the pickers out in order to draw them in line, and the older the loom the more the pickers will have to cut out. Failure to put the pickers on properly at least doubles the shuttle usage at many mills, and this can be proven by any mill man who is not getting it done, by having it done.

Lug strap bangers—If the lug holders are positioned too low on the picker stick it will create a harsh heavy pick, and the shuttle will cut numerous capers in its passage across the lay, and this will put unnecessary strain and wear on all parts of the pick motion and will cause the loom to run badly generally by slamming off, breaking warp threads and sometimes throwing the shuttle out of the loom. And of course all this will create unnecessary wear on the shuttle. The proper height for the lug hangers will vary slightly from mill to mill, due to different model looms, fabrics being woven, speed of looms, etc. The supervisor should determine what is best for his job and then give each loom fixer a gauge to use for minimum height setting, and then of course see to it that they are used. With other conditions right, any model Draper loom should run satisfactory with a minimum setting of eight-inch height on the lug strap from the top of the heel bolt to the bottom of the long lug. Of course the higher the better.

Stroke on picker stick—The stroke on the picker stick should be long enough to carry the shuttle out of the box to a point where it is released from the grip of the back binder. This will also vary on different model looms, and should be determined by the supervisor to suit local conditions. If the stroke on stick is too short it will reduce the power on the pick and cause the loom to slam off occasionally. If the stroke is too long it will prevent the shuttle from tracking straight and cause excessive wear on the shuttle and other undesirable results.

Timing of the pick—All Draper looms are designed to pick, the shuttle start leaving the shuttle box when the reed is a specified distance from the fel, or beat of the cloth. This will vary on the different model looms. The E and all other models built before the X model made its appearance was designed to pick when the crank arm was on exactly top center position, but the X models are built to pick before the crank arm reaches top center, and this will vary on some of the X family. If the loom

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picks too early it will reduce the power by throwing the shuttle into the sheds before they are opened sufficiently to receive it, causing the loom to slam off occasionally, and this will also wear the back outside wall of the shuttle by pressure exerted on it by it entering the sheds too early. If it picks too late a harsh pick is created and the shuttle will not track straight.

Crank Arms—If lost motion is allowed in the crank arms it will break the smooth rotation of the lay and prevent the shuttle from tracking properly and boxing correctly. It will also cause many other troubles which will be mentioned later in this series.

Harness setting—Next to the improper paralleling and setting of the pickers, bad harness setting causes more wear on the shuttle and other different kinds of troubles than any other one thing. If the harness are set too high in relation to the race plate the shuttle will be thrown against the back box plates and wear the shuttles and the plates and will also prevent the shuttle from boxing properly, and this creates numerous troubles which will be mentioned later. Harness setting is so vitally important to the proper operation of the loom that the men who are responsible for this job should be well trained and then their work should be checked daily by someone who knows.

Harness timing—The proper timing of the harness is just as important as the harness setting. If they are timed too early the sheds will close on the shuttle before it clears the sheds on the opposite end and the shuttle will be raised and thrown against the back box plate, and this wears the shuttle and the plates and prevents the correct boxing of the shuttle. If they are timed too late the sheds will not open up early enough to receive the shuttle when it enters the sheds and the shuttle will be thrown out sometimes, and this will also reduce the power and cause the loom to slam off and will create many other troubles,

such as excessive warp yarn breakage and wear on the shuttle.

Filling Feeler—Usually when an old worn shuttle is replaced with a new one some of the settings on the filling feeler will be thrown off, and if not corrected, imperfect cloth in the form of mispicks and thin places will be the result.

Transferer—The transfer mechanism should always be carefully checked when a new shuttle is put into the loom because almost invariably the transfer hammer will be too deep on the new shuttle, and if this condition is allowed to remain, trapped bobbins and burst shuttles will result.

Shuttle bristles—I very often have the question asked me: "How should the shuttle bristles be placed for best results." That question, like the one, "How fast will a loom run?" is so involved that it cannot be answered specifically without knowing the local conditions at the mill in question. Different filling yarn numbers, twists, and other varying characteristics make it necessary to place the bristles differently to get the job done properly. The primary reason for bristles is to tie the filling down at the small end of the bobbin in order to prevent it from flying out of the shuttle eye and becoming entangled and broken. Different types of filling behave differently and different ways and means must be provided to control its actions while the loom is in operation.

Some weave room men go to the extreme in having parts replaced when a new shuttle is put in the loom. They remove and replace the parallel plugs, the picker sticks, the pickers, the front box plates and the back binders, etc. This is extending caution to the point of wastefulness. It is true that all the above mentioned parts should be in good condition but the loom fixer should be trained to be able to determine if the parts should be replaced. If the fixer knows that his work is going to be checked he will soon learn how to do the job correctly and economically.

Substantial Weave Room Savings Attributed To Use Of Thread Friction Testing Device

A THREAD friction testing device described as having excellent value in manufacturing plants as well as research laboratories, has been developed and patented by J. Raymond Fish, Sr., now manager of the National Weaving Co. Division of Beaunit Mills, Inc., at Lowell, N. C., and for many years manager of the Suncook (N. H.) Mills Division of Textron, Inc.

"Tension-Rite" is an instrument which may be used for tests in laboratories, weave rooms and other departments under any constant speed, any type yarns through any type make-up of tensions used. Operators can be trained in its proper use in a very few hours. More than 150 single-shuttle looms can be tested and checked in seven hours.

According to Mr. Fish, the device enables mills to double the life of shuttles, reeds, loom leathers, pickers, check straps, box fronts, etc., by proper cycle of inspection and tension correction. Savings in winding and battery hand

costs and handling are said to be cut as much as 200 per cent.

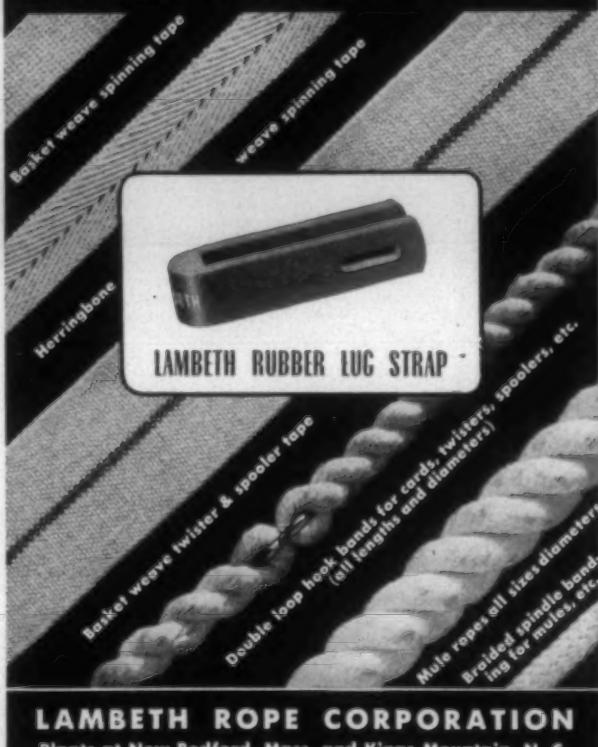
To test yarns wound on loom bobbins, a full bobbin is doffed mechanically into the shuttle in order to have a uniform starting point. The shuttle is taken from the loom



Pictured at left is J. Raymond Fish, Sr., inventor of the Tension-Rite instrument for testing of thread friction.

and placed in the "Tension-Rite" shuttle holder rack. A suction switch is turned on, showing a red signal light. Yarn is threaded through tensometer wheels, guide, and

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withdrawal rollers; the yarn will then be drawn pneumatically into venturi tube to waste drawer. The roller switch is turned on, a green signal light shows and tension will begin to be indicated on dial. Yarn withdrawal speed is regulated by turning speed range wheel to desired amount indicated on dial opposite arrow. Any adjustments on shuttle tension can then be made. In addition to shuttle bobbins, other packages such as cones and tubes can be tested by the same procedure.

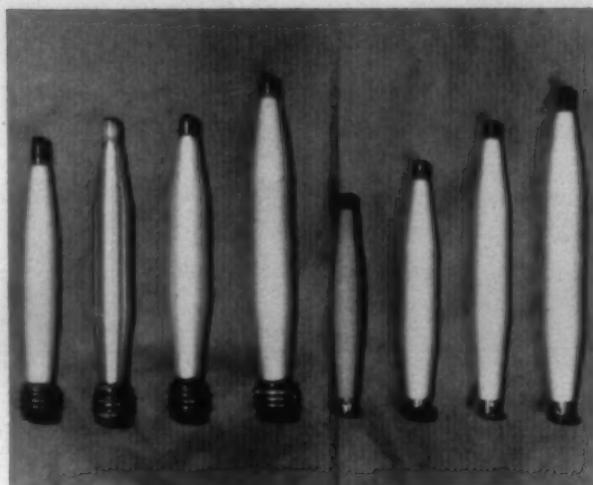
Mr. Fish advises that a rule-of-thumb method for determining the best yarn controlling tension is: use up to one-half the denier or count of yarn expressed in grams



This picture shows device for holding the shuttle in testing position at loom. Effective tests and inspection of shuttle for unnecessary wear can be made frequently and economically.



Various types of yarn packages can be tested on the Tension-Rite. More than one tensometer is required for some tests, and sometimes more than one tension device is necessary. The tensometer shown is of the indicating type; others can be utilized.



Indicating evolution of progress in length and diameter of yarns wound on quills which Inventor Fish states has been made possible through increased knowledge of tension build-up from one size package to another.

tension; divide this amount (one-half the denier count) by two-thirds for quilling tension and one-third for shuttle tension.

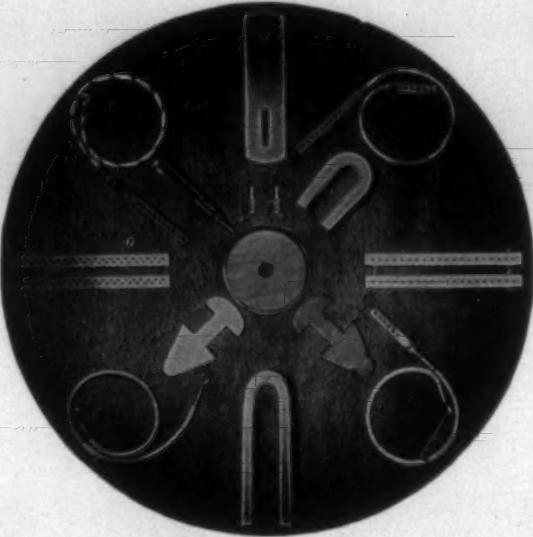
The following is a statement from the director of research for one of the loom builders: "We have had in service since Nov. 11, 1950, a 'Tension-Rite' thread friction testing device. We have found it especially helpful in making comparative tests of various shuttle tensioning devices and in adjusting shuttle tension to predetermined standards. We have found it of value in measuring changes in tension in yarn being drawn off packages other than filling bobbins and in locating causes of variation. It is our opinion that such an instrument would find a useful place in any weave room where filling tension is important, because it would allow all shuttles to be adjusted to a predetermined standard before being placed in looms. This should eliminate cut and try guesswork, save valuable loomfixers' time and reduce cloth defects."

The "Tension-Rite" device is manufactured by Air Engineering Co., of Charlotte, N. C., and carries Patent No. 2,407,545. Inquiries may be addressed to Mrs. Stella A. Fish, Room 810, Barringer Hotel, Charlotte.

N.Y.Q.M.P.A. Meets With Duck Industry Group

Procurement of cotton duck for the armed forces was discussed April 10 at a meeting of officials of the New York Quartermaster Procurement Agency with members of various segments of the duck manufacturing industry. Sponsored by the Quartermaster Association as part of its program of Quartermaster Corps-industry co-operation, the meeting was attended by eight members of its duck branch, eight members of its carpet branch, six members of its pile fabric upholstery branch, and five members of its flat fabric upholstery and drapery branch. Everett H. Johnson, vice-president of Wellington Sears Co., Inc., served as temporary chairman. The status of both current procurement of cotton duck and industrial mobilization for future duck requirements were described by members of the New York Quartermaster Procurement Agency staff. Representatives of the Office of the Quartermaster General spoke on specific research and development problems of the duck industry. The group joined in free discussion of the subjects covered.

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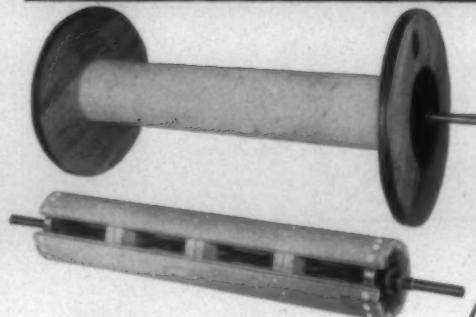
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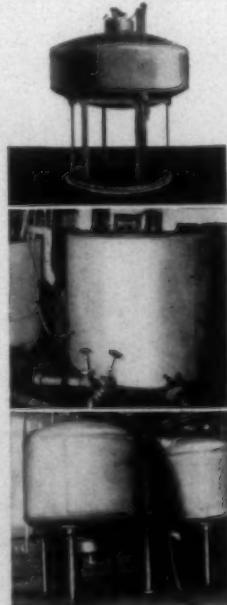
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Fundamentals Of Hot Air Drying

By LEO WALTER, Consulting Engineer (Part Two)

FOR hot air drying, whether using low or medium temperatures, or higher temperatures as in curing of coated fabrics, the relative humidity of the drying air is usually adjusted by means of setting of air dampers. Where partial recirculation of air is applied, temperature and humidity of the air entering the drying space can be varied at will within certain limits by mixing hot, dry and humid recirculated air, taken from the exhaust duct, with fresh inlet air. This mixture can then be heated up, and enters the dryer at predetermined temperature and relative humidity. Damper adjustment and control of re-heating of the mixture of exhaust air (recirculation) and fresh air influences temperature and humidity conditions, and thus the rate of drying.

Value of Recirculation

The enormous value of application of recirculation of air, which has passed through a hot air dryer, but has not been fully utilized, is not always realized in textile plants. The fundamental rule should be that: "No air should be exhausted from a hot air textile dryer unless it has given up most of its heat content to the textile fibers and to their moisture, and has absorbed the maximum possible amount of evaporated water vapor, driven out from the textile goods to be dried." In other words, what must be continuously watched by the conscientious textile plant engineer, using hot air dryers, is (a) lowest possible exhaust air temperature, and (b) highest possible saturation of exhaust air. In other words, no hot air textile dryer should be operated without a wet and dry bulb thermometer in the air exhaust.

Most textile dryers work at reasonably high air speeds, so that only part of the heat in the air is effectively used and the exhaust air is often far from saturated with moisture. This becomes very pronounced in somewhat overloaded continuous hot air textile dryers, using higher air speeds, and application of recirculation is most recommendable in such instances for reducing heat losses. By feeding part or all of discharge air back to the fan inlet, and allowing just sufficient air to be exhausted to carry away the evaporation, considerable steam savings can be achieved.

Lack of appreciation of the value of recirculation is responsible for very great heat losses. Lack of efficient operation of exhaust air dampers, where recirculation is provided for, reduces the value of recirculation in practice. Whereas usually the need for temperature control of a textile dryer, whether by hand or automatically by means of temperature regulators is realized, control of exhaust air humidity is usually not performed as it should be.

Advantage of Reducing Exhaust Temperature

It seems best to show the advantages of securing the lowest possible exhaust air temperature in drying on hand of

an example showing the steam which can be saved by reducing the exit air temperature from a drying machine, neglecting the effect on surface heat losses.

A textile tenter normally discharges 14,000 pounds of air per hour at a temperature of 166° F. with a relative humidity of 18 per cent. Let us calculate the amount of heat which is saved in the hot air discharge by reducing the temperature to 146° F.

The saving in heat comes from the smaller amount of heat which has to be put into the air and also into the water vapor which it carries. This vapor is, in any case, superheated because of its very low partial pressure. The heat saved in heating up the air

$$\begin{aligned} &= \text{weight of air} \times \text{specific heat} \times \text{change in temperature} \\ &= 14,000 \times 0.25 \times (166 - 146) \\ &= 7,000 \text{ BTU/hour.} \end{aligned}$$

The weight of water vapor in the air from a psychrometric chart is 310 grains per pound at a temperature of 166° F. and a relative humidity of 18 per cent.

$$\begin{aligned} \text{The total weight of water vapor} &= \frac{14,000 \times 310}{7,000} = 620 \text{ lbs./hour} \\ \text{The heat saved in superheating the vapor} &= \text{weight of vapor} \times \text{specific heat} \\ &\quad \times \text{change in temperature} \\ &= 620 \times 0.5 \times (166 - 146) \\ &= 6,200 \text{ BTU/hour} \end{aligned}$$

Assuming the specific heat of superheated steam is 0.5.

So, the total heat saved is 76,200 BTU/hour and represents 76,200 or 84 pounds of steam per hour if the steam pressure is 60 p.s.i. Reducing the final temperature of the air by 20° F. has made a saving of 7.6 per cent in the steam consumption, which is normally 1,100 lb./hr. and the relative humidity has only increased to 28 per cent.

Humidity Control of Hot Air Dryers

It is sometimes surprising to find warm air dryers or drying rooms in operation, where control of humidity of air is neglected. In some instances, the exhaust damper is always kept nearly closed, with the result that very warm, but very humid air fills the drying room in a sort of stagnant condition. In other cases, admixture of fresh air to recirculation is not sufficient, or reheating of the air mixture is not sufficiently high for increasing capacity of the air mixture for vapor absorption from the goods. Scarcity of low-priced reliable and simple hygrometers for exhaust temperatures between 200° and 300° F. might account for many instances where humidity measurement is neglected, but even a higher layout of money is justified by achieving better and more uniform results. The general ruling in practice should be to be able to measure temperature and relative humidity of the exhaust air of each textile dryer in order to secure that the air leaves a drying apparatus or drying room at con-

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ditions which ensure full utilization of air qualities during the drying process.

Fig. 4 illustrates diagrammatically how humidity can be automatically controlled by means of a humidistat, located in the drying room. The method applied is variation of recirculation of air, and a pneumatic lever motor adjusts the interlinked exhaust damper and recirculation damper gradually, according to impulse from the humidity controller. The recirculated air is then mixed with a definite amount of fresh air, then reheated and blown into the drying room.

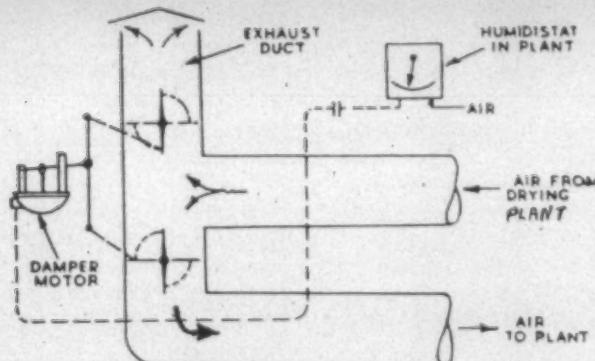


Fig. 4—Controlled recirculation by means of humidistat regulates air humidity.

Basic Temperature Control Problems

Some textile plant engineers agree to the necessity for thermostatic control of hot air temperature, but they think of the control problem rather in a distorted way. Thermostatic control of hot air textile dryers can be simple, and sometimes the use of a thermostat switch with a solenoid valve in the steam or hot water supply to the heating coils will give satisfactory on-off control. In other instances, especially for continuous textile dryers, more elaborate pneumatic controllers are required. Much depends on the controllability of the dryer design as such, and of working conditions, whether simple gradual proportional mode of control can be used, or reset control is required. Controllability of a textile dryer depends, among other factors on process time lags, as shown in the example of Fig. 4A. A conveyor dryer for loose wool with multi-tubular air heater is illustrated, and shows how thermostatic control works.

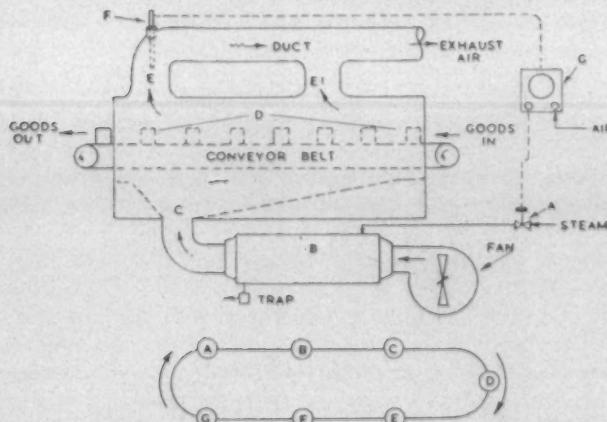


Fig. 4A—Lag cycle in automatic process control. Example: conveyor dryer with steam-heated multi-tubular heater, as used in textile processing.

A change of hot air temperature in the drying space D is not immediately detected by thermostat F, immersed in outlet air duct E. A certain time will elapse before the thermostat bulb F produces a control impulse, which is conveyed to recorder-controller G, and then to steam control valve A. The latter varies the rate of steam input to multi-tubular air heater B after another time lag, and another retardation or delay occurs for change of air temperature in hot air inlet duct C. The part of the closed loop A-B-C-D-E shows process time lags, and the following section of the closed loop F-G-A symbolizes controller time lags. The total time lag cycle shows how time elapses between actual occurrence of variation of hot air temperature within the textile dryer, and control action of steam control valve A. Temperature control will be more accurate if process time lags are small, and the control instrument is sufficiently sensitive and responsive to follow temperature changes quickly. Otherwise too much time would elapse between occurrence of a temperature disturbance within the hot air space of the textile dryer, and the corrective action of the steam control valve. The basic ruling for thermostatic dryer control is that "Dryer characteristics must match the characteristics of the control instrument, and vice versa."

Where a dryer reacts quickly to throttling from the steam control valve, the control mechanism must not be sluggish, but quick and accurate. On the other hand, the most responsive control mechanism would be futile, if applied to a dryer the hot air temperature of which varies only very slowly in spite of vigorous action on part of the steam control valve, i.e., a dryer which lags hopelessly behind in its reaction to control action.

The above explains the fact, why the fitting of a temperature regulator does not improve dryer efficiency under all conditions. It is only the choice of the correct temperature controller type which will improve matters after installation.

Combined Temperature and Humidity Control

Because the temperature of a drying process can be kept constant, and the rate of drying at this air temperature can be varied as desirable by altering the relative humidity, automatic control systems can be worked out, embracing an air heater battery controlled at constant temperature, and a system of damper control for mixing of return air and of fresh air, as mentioned before. Fig. 5 illustrates diagrammatically a pneumatically operated combined temperature

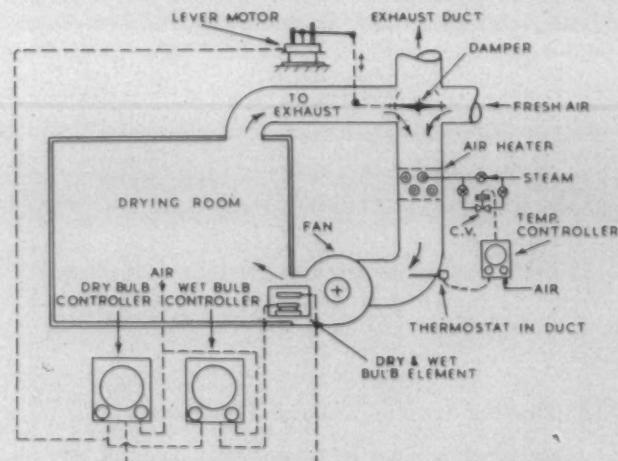


Fig. 5—Wet and dry-bulb humidity control of drying room.

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and humidity control system for a drying room. The wet and dry bulb control element is located in the outlet air duct, and sends impulses to the lever motor, according to the psychrometric difference sensed by the element. Position of the control damper ensures the desired mixture of wet recirculated and dry hot fresh air. A separate temperature controller regulates steam admission to an air heater battery in the inlet duct to the fan in order to keep drying temperature steady.

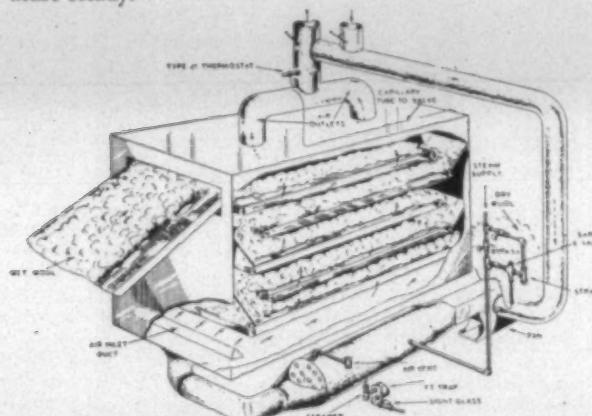


Fig. 6—Thermostatic control of loose wool drying machine with tubular heater.—(Courtesy Sarco, Inc.)

Fig. 6 shows a conveyor type of dryer for loose textile fibers (wool) heated by steam. Warm air is produced in a tubular air heater, consisting of an outer shell and straight tubes, through which a fan blows air for being warmed up to the desired air temperature. Steam is supplied to the cylindrical space of the heater, which should be properly trapped and air vented as shown.

The warm air, leaving the heater enters the drying space through an inlet air duct and penetrates the material to be dried in an upward direction. The goods, which are loose wool in our example, are being fed to wire gauze conveyor belts, and enter the drying apparatus from the top. As they reach the end of the top conveyor they fall down to the next and so on until they leave the dryer at the opposite end of the machine. In order to achieve automatic temperature control it is necessary to place the control valve in the steam supply pipe for controlling the amount of heat input according to demand. The control valve is being shown fitted in a by-pass, which makes servicing and inspection easier. It may be that under certain conditions the by-pass could be made smaller to deal with running heat load only.

It seems that the best position for the thermostat bulb has to be located in or near the exhaust air duct, where it can feel and react to slight changes of temperature of the outlet air. This thermostat bulb position controls the rate of drying by keeping it constant irrespective of loading of the dryer and of actual air temperature within the drying zone.

By locating a thermostat bulb or thermocouple at the outlet from an air heater battery or tubular air heater, the inlet temperature of air into the dryer can be kept constant. This, however, does not control the rate of drying and it depends entirely on the heat load whether the desired drying effect can be achieved. What is actually performed is to keep air temperature near the dryer inlet steady.

It should be mentioned that in many instances humidity control is performed by hand, whereas thermostatic control

is applied to the source of heat, such as steam, hot water, gas or electricity. The reason is that automatic humidity control by means of air dampers and damper motors, whether pneumatically, hydraulically or electrically operated, is somewhat costly because often special louvre dampers have to be installed in place of the single-leaf dampers as supplied by the makers of drying machinery. This semi-automatic control is, of course, better than hand control, but it still leaves the drying plant at the mercy of the plant operator, who has to adjust the air dampers in the exhaust duct and the mixing damper for recirculation and fresh air by hand in accordance with indication of a wet and dry bulb hygrometer. Where the size of drying apparatus and nature of the textile goods warrant it, fully automatic combined temperature and humidity control is by far preferable. For modern conveyor dryers the trend is to control conveyor speed automatically from humidity content of goods at the outlet.

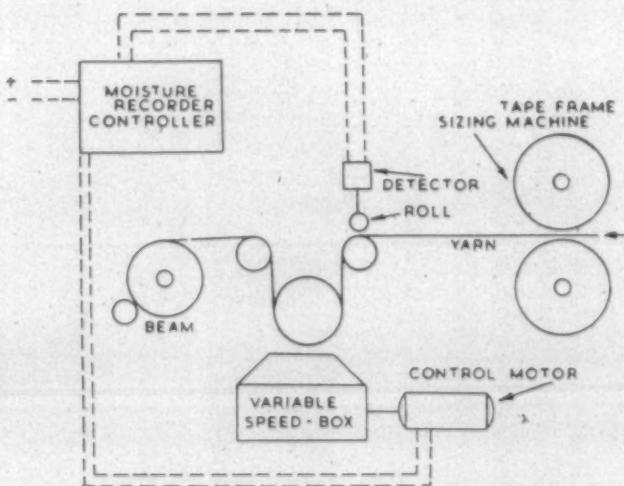


Fig. 7—Speed control of yarn slasher with Moist-O-Graph according to moisture content to yarn.—(Courtesy Brown Instruments Division of Minneapolis-Honeywell Regulator Co.)

An example is shown in Fig. 7, illustrating automatic speed control of yarn, leaving the size box of a slashing machine. A detector roll glides over the sized yarn and produces electric control impulses, which latter vary in intensity with the size content of the yarn. Too much size increases automatically the speed of moving the yarn through the bath and vice versa. In the following drying section of the slasher more uniform drying can thus be expected. New moisture detector devices replace the detector roll by an electric field between two electrodes between which the fabric moves. The field intensity varies with varying moisture content of the fabric entering the continuous hot air dryer. These impulses are electronically magnified and are then used to vary the fabric speed. It can be visualized that very precise rates of drying can be achieved in a continuous fabric dryer by automatically controlling all three main factors for drying, namely, air temperature, relative humidity and speed of movement of the fabric through the dryer.

Zone Drying

Modern continuous textile dryers make use of zone drying, whereby drying of the textile fibers occurs in stages of different rates of drying. This shortens the total time of drying, thus increasing output, and produces more precise results. Each zone of the dryer is automatically controlled regarding air temperature and humidity, has its own inlet

fan, sometimes supported or replaced by zonal air circulation fans. Recirculation of air can also be provided at will, making the drying procedure very elastic and controllable.

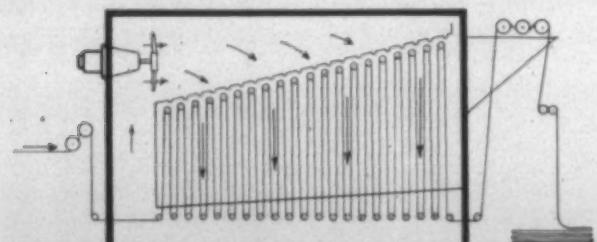


Fig. 8—Roller hot air cure, using circulated air through air nozzles. (Courtesy Proctor & Schwartz, Inc.)

Many an older continuous hot air dryer for textile goods may be worth while to be reconstructed for application of controlled zone drying. At the same time, another modern means of improving air distribution should be considered, namely, the use of multiple nozzles, impinging the hot air against the fabric from one or both sides. Fig. 8 illustrates a modern Proctor dryer, using multiple air nozzles for controlled rate of drying and curing. For curing of chemically impregnated fabrics more complicated control problems might be present, when physical or chemical reactions come in during processing. These more complicated drying problems need often very careful study and require more elaborate power-operated control instruments, preferably pneumatic temperature and humidity controllers.

Summing up, the following should be borne in mind by the progressive textile plant engineer. Most warm air dryers or drying rooms lend themselves readily to one or the other form of temperature control, humidity control, and sometimes speed control, but working conditions of the dryer must be good, and drying efficiency with hand control has to be satisfactory, before automatic control can be applied. Plant characteristics play a much bigger part regarding success or failure of automatic control than is usually realized, and the best and most elaborate temperature—or humidity—regulator can fail, if working conditions result in very low

controllability of the dryer. A careful analysis carried out by the drying expert in close co-operation with the responsible plant engineer will usually disclose weak spots in drying operation. After these have been improved, automatic control will generally achieve its purpose, namely, to produce more uniformly dried goods at maximum output, with a minimum cost and labor. The main point, however, is that the textile plant engineer knows his dryers well enough to be able to spot their weak points. Once a diagnosis of inefficiency is clear, means and ways for improvements of dryer efficiency can be found and applied.

TRICKS of the TRADES

Edited by PROF. KENNETH S. CAMPBELL

Chemistry and Dyeing Department, North
Carolina State College School of Textiles

Interpretation of Cuprammonium Fluidity Test

The letter appearing below together with the answers to the questions it contains is printed in the belief that it is of general interest to many directly or indirectly connected with the wet process of textiles. We intend to present a more or less detailed discussion and comparison of the several methods for determining the fluidity of cellulosic materials at an early date.

"I am vitally interested concerning some cuprammonium fluidity tests which were recently made for us by a commercial laboratory and would appreciate some information from you about them. I am particularly interested in answers to the following questions:

"(1) What does the test actually measure?"

(The test actually measures the viscosity [it is somewhat more convenient to express results in terms of fluidity which is the reciprocal of viscosity] of a definite amount of cellulose dissolved in cuprammonium hydroxide. This viscosity is a measure of the "average degree of polymerization," or molecular chain length or size, of the cellulose which has been dissolved. It has been shown that the molecular size is directly related to the tensile strength of the cotton fiber or materials made from it. As the cellulose chain molecule gets smaller and smaller it gives a less and less viscous solution in cuprammonium. The viscosity or fluidity can therefore be a measure of the degree to which cotton has been degraded by some chemical means.)

"(2) Is the test reliable if properly performed?"

(Yes. Considerable care and experience is necessary however. The test is by no means a quick easy one.)

"(3) With the following fluidities reported for competitive brands of bleached sheeting would there be any significant difference in the cloth: A. 7.1; B. 5.8; C. 4.6?"

(It is doubtful whether there would be any measurable strength difference in cloths A, B, and C. If the tests have been properly performed, the figures do indicate incipient or latent damage. This means that if the same fabrics were now exposed to the same treatment, i.e., launder-



TARPAULIN MADE OF A NEW TIGHTLY-WOVEN FABRIC developed at the Southern Regional Research Laboratory is being service-tested as covers for the batter's box and pitcher's mound at Pelican Stadium in New Orleans, La. Examining the material on the field are, left to right: Hoyer Mayer, Jr., R. J. Cheatham, Joe L. Brown and John J. Brown. Joe L. Brown (son of Joe E.) is an official of the stadium. The others are members of the laboratory's cotton mechanical processing division.

BLEACHING, DYEING & FINISHING

ing, bleaching, etc., fabric A would be expected to show strength loss first.)

"(4) What would be the result of highly bleaching with a chlorine bleach?"

(Extensive bleaching with hypochlorite (or any other bleaching agent) would result in progressive increase in the cuprammonium fluidity value.)

"(5) If the fabric is damaged by excessive bleaching would the fluidity change?"

(Definitely, as explained above.)

"(6) When SO_2 is used as an anti-chlor and is not completely removed would there be any possibility of later tendering?

"(7) If any SO_2 is left in the cloth would tendering action be accelerated during the drying of the cloth on steam dry cans?"

(Residual acidity, whether from incompletely removed SO_2 or any other source, if greater than a certain minimum concentration, would result in later tendering, particularly if the fabric is exposed to high temperatures.)

A New Continuous Stock Dyeing Machine

Today's newest development in machinery for the application of color to textiles is the continuous dyeing unit developed by Sumner H. Williams of General Dyestuff Corp. It will be known as the Williams continuous fiber processing machine and is built by Morrison Machine Co., which has co-operated in its development.

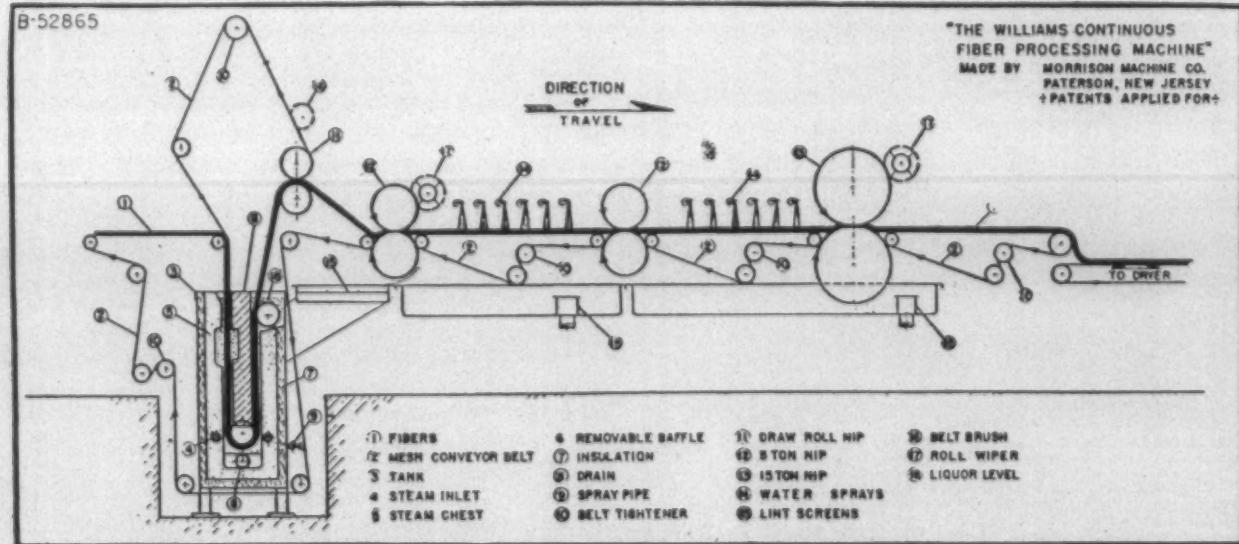
The new machine applies principles which have proved valuable in the continuous processing of piece goods: (1) very low liquor-to-goods ratio; (2) controlled, rapid passage of the goods through a small volume of liquor; and (3) thorough and uniform impregnation of goods with the treating solution. As in the case of the Williams unit for piece goods these factors combine to permit treatments to be carried out at higher than normal temperatures and completed at a much faster rate. An additional feature of the new equipment is that the goods are never under tension or restraint and therefore present no obstruction to

rapid penetration of the treating solution. Of course a major advantage lies in getting away from discontinuous, batch operation, and its attendant inefficiency.

Although the new unit undoubtedly required a lengthy period of mechanical evolution, it is essentially of simple construction. The novel feature of it, and probably the part which caused the most headaches in developing, is the method of conveying the loose stock through the machine. The conveyor consists of two endless flexible chain link belts or screens of stainless steel which form a sandwich with the material to be dyed as the filling (see illustration). The fiber stock is evenly laid upon the lower traveling apron as a lap or loose stock, then the upper apron comes down upon it and it is carried vertically through the U-shaped treating bath of 35-gallon capacity (where the immersion time can be varied within a range of 30 to 90 seconds), and out where it is squeezed, dropped onto another mesh conveyor apron upon which it is sprayed with water for washing or with any desired series of chemical solutions depending upon the nature of the treatment. It then is squeezed again and may be conveyed directly to a continuous stock dryer.

Based upon a top speed of 33 yards per minute and one or two pounds of stock per yard of conveyor, the capacity of the present 40-inch unit can range from 500 to 3,000 pounds per hour. The floor space required is approximately six by 17 feet. If desirable for the process involved, it is entirely feasible to set up a series of these units as a continuous range. One especially valuable feature is that as small a quantity as eight or ten ounces of stock may be run through alone and the results, which can be obtained in five minutes or so, can be used for setting up the formula for continuous operation. Because of the design of the machine small lots can be economically run.

The machine is intended to carry out efficiently a variety of specific processes among which are the following: dyeing viscose staple and tow and cotton raw stock with all dyes ordinarily used, dyeing staple acetate with acetate colors, wool raw stock scouring and stock dyeing with vat colors, dyeing Orlon fiber with vat colors, and dyeing staple nylon with vat and acetate colors. It is expected to prove especially useful in the application of vats and naphthols to rayon staple.



Sketch of the continuous fiber dyeing unit recently introduced by General Dyestuff Co.

Maintenance, Engineering & Handling

Use And Misuse Of Electrical Equipment In Cotton Mills

By SWAFFIELD COWAN, Factory Insurance Association, Charlotte, N. C.

THE use (and misuse) of electrical equipment is believed to be largely responsible for the tremendous increase in cotton mill fires in recent years. By misuse of electrical equipment I would consider exactly what the name implies. Typical of examples which I recall are the use of splash-proof motors in dry, liny locations where totally enclosed non-ventilated or textile type motors should have been employed; the continued use of antiquated, obsolete, deteriorated and even dangerous electrical equipment which should have been replaced years ago; and the installation of spark producing equipment, such as starters, contactors, switches, when housed in enclosures which were designed not to confine sparks or exclude lint, but primarily to protect the user from accidental contact with live parts within. Last and certainly not the least, is the mechanical abuse to which such equipment is subjected, combined with the almost complete lack of what I would term good electrical maintenance. These conditions can be corrected, but it is going to require a real effort on the part of each and every one of us.

Trouble does not always result from every abused or misused piece of electrical equipment, but the percentage of fires whose origin has been traced conclusively to electrical equipment is astonishingly high. There are many electrical failures that produce only small "no claim" losses. Ask the plant electrician or mechanic how many failures he has. Do not ask him if he is having trouble, because his answer to that would be relative. Trouble is his job, and it is always with him; only when it becomes overwhelming does it result in complaints about it. If we want facts on which to base our efforts to improve this condition, let's get them from the one who knows firsthand, by direct questions.

Cotton mills generally operate from a 550-volt, three-phase, 60-cycle ungrounded system and I shall confine my remarks primarily to such circuits. From the mill substation the transformer secondary circuit is usually run overhead, on multiple circuit, wood pole lines, to a central switchboard room. In some instances an outside feeder system is used with the transformer secondary extended along one side of the mill buildings, and with taps taken off directly to inside feeders. These taps in a way, might be compared to multiple services. There seems to be little regard given to the number of taps, and frequently they are unprotected or protected only by small obsolete circuit breakers having very little if any, short circuit interrupting capacity. In such instances there is usually no other means of interrupting or breaking the circuit from the transformer other than

the manually operated pole disconnect switches at the transformer. In an emergency necessitating clearing of the long main feeder, the only safe means would be to first open the numerous feeder services to remove the load, and then to open the disconnects at the transformer. Obviously such an arrangement is not desirable from many standpoints. Such systems at their inception, must for some obscure reason have been desirable. As time has passed additional buildings have been added, new circuits strung on existing poles and other changes made, including probably progressive increases in substation and feeder capacities. This has left these mills faced with an entirely inadequate system.

There is the difficulty encountered annually from open outside feeders arising from lightning and lightning surges. Distribution type lightning arrestors have been installed on such lines for some time. These were not overly effective in reducing the breakdowns within the mill equipment, probably because of ineffective grounding of the protective equipment, and because the difficulty arises largely from surges rather than from direct lightning strokes. In more recent years the application of suitable surge protection capacitors installed in parallel with the arrestors has been advocated. This has produced marked results in lowering the frequency of disturbances occurring during lightning storms. Again however, the effectiveness of such protective systems or devices is dependent on the effectiveness of the ground.

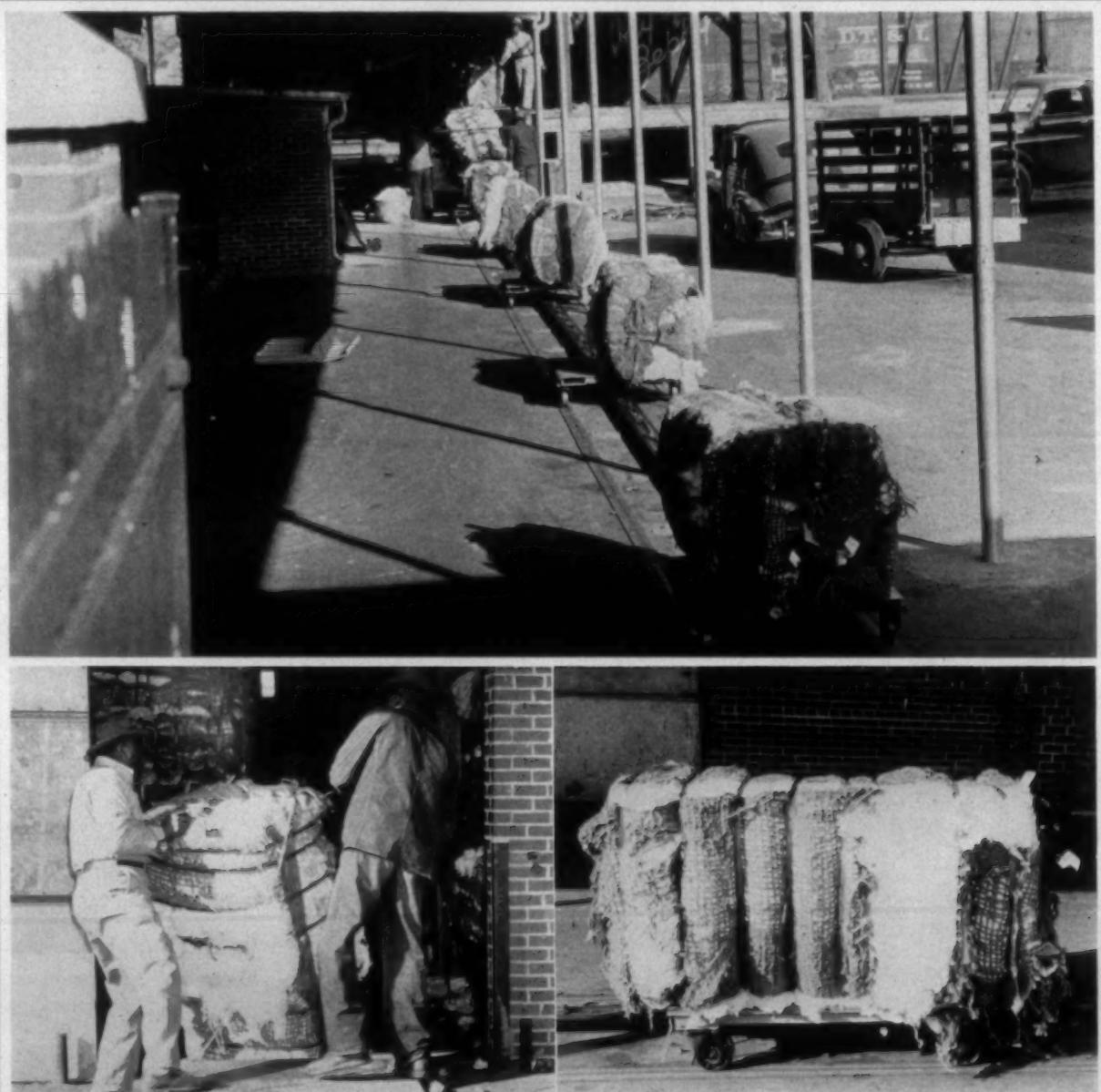
I have seen many lightning protective devices with their grounding conductors either disconnected at the arrestor or torn away at the base of the pole. I actually saw one installation where two of the three arrestors were out of commission, one hanging by its lead wire. When I asked the master mechanic why this had not been repaired, I was answered in this manner: It seems arrestors had been installed several years ago and the electrical failures from lightning had been reduced. However, he had found that he personally had to replace the lightning arrestors on several occasions. He learned that less personal physical effort was required to have his men replace a motor, than for him to climb the pole and replace an arrestor. He had taken the easier though more costly way out. I cannot exactly say that this is misuse of electrical equipment, but surely is misuse of something. I feel that most cotton mills, certainly those in the Southern storm belt, will welcome competent advice regarding lightning protective devices. We should remind them of the need to inspect those devices frequently before and during the lightning seasons.

MAINTENANCE, ENGINEERING & HANDLING

and caution them not to overlook the need for maintaining low ground resistance values. Since very few of our cotton mills have facilities for making ground resistance tests, electrical contractors could be of service in locating poor protective grounds and in selling the necessary corrective measures such as connecting to an underground water main, driving multiple grounds, driving deeper grounds, or even salting.

Considering again the power supply, the older mills utilized a switchboard, often located it in a corner of the machine shop. It usually consisted of a number of feeder

breakers of the oil immersed type, connected to an extension of the transformer secondary bus. Many of these installations are still in use, although they have long passed their period of adequacy; and their short circuit interrupting capacities have been exceeded by the increased short circuit power available. Frequently, the feeder loads have been increased and in some instances uniformed "gremlins" intending to be helpful have seen fit to render the tripping mechanism inoperative, sometimes even tying them up. Since these rooms usually have a combustible floor and ceiling, and the possibility of an oil fire exists, they have required automatic sprinkler protection. It does not require much imagination to visualize the effect of a severe short



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This operation proceeds at the rate of seven bales every two minutes. Thus the conveyor serves the purpose of speeding up unloading and storing, saves manpower and promotes safety by eliminating much lifting and shoving of the heavy bales. The conveyor also is used to remove cotton from the warehouses when it is needed by the mill's opening room, dropping it off there for the first process in manufacturing.

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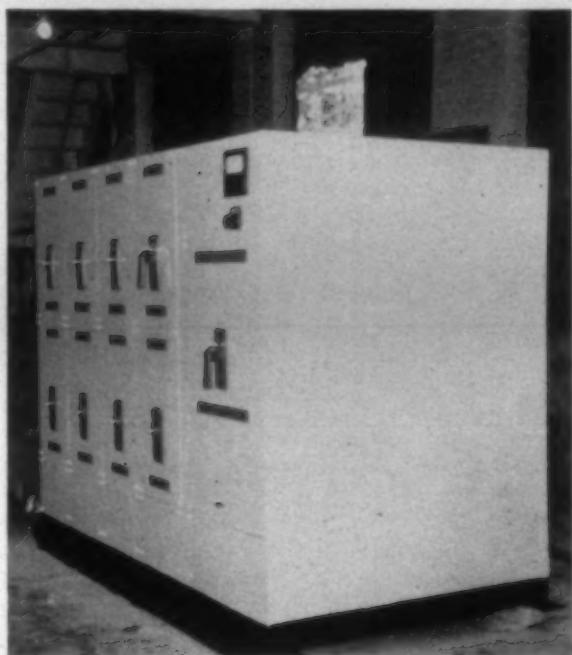
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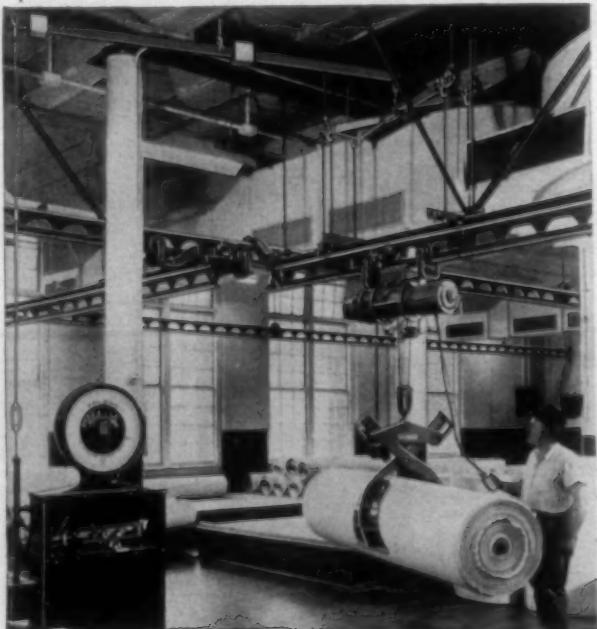


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circuit within the mill, failing to be promptly cleared by one of these "one horse shay" breakers, which in turn might fail violently with a resultant oil fire. In such an occurrence, the sprinklers would undoubtedly go into action, probably confining and controlling the fire and saving the building. In the meantime it is quite probable that all of the other switchgear would have been involved, either by fire or water damage or by subsequent arcing and short circuiting. Very expensive and prolonged shutdowns of a mill are often the result. Where possible, such obsolete equipment should be replaced with a properly engineered installation of suitable air circuit breakers, preferably including both instantaneous and overload protection. Since air circuit breakers do not involve the probability of an oil fire, it is preferable to locate such equipment in a fire resistive, cut off, room so that sprinkler protection may be rightly omitted. Of course, in such instances the room should be used for no other purpose than to house the particular switchgear. Many mills, especially where inside space is at a premium, have found the use of suitable outdoor switchgear to be highly satisfactory.

Because of the tremendous amount of short circuit current available at most of the larger mills, it is frequently economically advisable and sound engineering to arrange a cascaded circuit breaker system; in other words, one main breaker which may require interrupting capacities of as much as 100,000 amperes, and then through proper co-ordination of the feeder breakers, their interrupting capacities may be selected on a considerably lower basis.

It is usually assumed that the selected circuit breaker will be loaded near its rating. To prevent undue operation under motor starting conditions, and since it is not intended to provide motor overload protection, a trip setting well above the breaker rating is usually recommended. This assumption is not always sound when cotton mill applications are concerned, and sometimes it results in nullifying the feeder over-current protection required by the National Electrical Code. Here the feeder load is largely a continuous-duty motor load, and it is often desirable to oversize the feeder. Then if an oversize circuit breaker is selected, we should be careful to base the selection of the trip setting on the feeder rating. There has been some misunderstanding on this score, and it might be well to remember that although the principle function of the modern air circuit breaker is to provide exceptionally fast operation under short circuit conditions, it should also provide the required feeder protection as well.

In the manufacturing areas of a cotton mill it is a fact that every piece of equipment is subjected to very trying conditions. Not only is there comparatively high temperature and high humidity, but also a tremendous amount of very fine, highly combustible fibers suspended in the air, gradually settling on and within the equipment. Lint is almost human in its persistent effort to get into places where it is not invited. It lodges on conduit systems, sprinkler pipes, columns, walls, on and under machinery, and on and inside of conventional N.E.M.A. type enclosures. I believe it is generally true that there is no industrial control enclosure specifically designed for such lint conditions, available to the cotton mill trade today. Although some of these enclosures are fairly tight, they do not exclude lint in actual practice. Lint will enter just about any opening

through which air can circulate. It filters in through mounting holes which are not plugged, through unused conduit openings, through poorly formed corners and seams, or loose fitting covers. Strangely enough it also gets into the mechanism when covers are knocked off or are accidentally left open.

I am firmly convinced that it is the gradual accumulation of lint within the enclosure of such devices as starters, switches, contractors, circuit breakers and similar equipment which eventually causes a large part of the trouble. Possibly it comes from a spark dropping on the lint bed which accumulates in the bottom of the enclosure; possibly from a wad of lint getting between contacts, causing one to run hot; possibly from lint wedging between moving parts of the core and armature causing a vibrating or loose contact or overhead coil; possibly a conducting path may be built up between poles resulting from gradual carbonization of lint fibers.

A few years ago when so much operating trouble was experienced with open motors in cotton mills, the electrical industry saw fit to develop the small non-ventilated totally enclosed motor, primarily for weave rooms, and later adapted to other equipment. These motors usually do not exceed 7½ horsepower. For larger motors the specially designed textile type of motor was developed. This is a ventilated motor, but with large smooth air passages which permit the lint to pass freely through it. Both of these motors seem to be doing an excellent job in their intended application. To minimize the difficulties of keeping tight the flexible conduit connections and eliminate trouble caused by broken flexible conduit, the use of type SO (Oil Resistant, Heavy Duty) flexible cord is advocated.

I have heard it said that the textile industry as a whole is one of, if not the largest, user of industrial control equipment in the country; and that this same industry is also the largest user of commercial electric power. Considering this and the fact that many of us believe there is a real need for an improved enclosure for arcing parts, we should suggest to the manufacturers of electrical equipment that they seriously consider the development of an enclosure which will meet the need of the cotton mill market.

Mr. Cowan's paper was delivered before last year's Conference on Electrical Application for the Textile Industry at Atlanta. It is typical of the thought-provoking information presented at these annual meetings.

E.C.A. Honors Concerns For Co-Operation

Certificates of co-operation were awarded a number of textile concerns recently in observance of the third anniversary of the Marshall Plan "in recognition of the technical assistance given to representatives of Western European industry visiting the United States under the auspices of the Marshall Plan to study U. S. production methods." So honored by E.C.A. were Foster Machine Co., Westfield, Mass.; the textile research department of American Viscose Corp., Marcus Hook, Pa.; the Institute of Textile Technology, Charlottesville, Va.; A. M. Smyre Mfg. Co., Firestone Textiles and Textiles, Inc., of Gastonia, N. C.; American Cyanamid Co., American Thread Co., Bigelow-Sanford Carpet Co.; Carbide & Carbon Chemical Corp.; Cluett, Peabody & Co., Inc.; Corn Products Refining Co.; General Aniline & Film Corp.; General Electric Co.; Pacific Mills; Reeves Bros., Inc.; Singer Sewing Machine Co.; J. P. Stevens & Co., Inc.; Sun Chemical Corp.; Textile Color Card Association and United States Testing Co.



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Promotions, Resignations, Honors,
Transfers, Appointments, Elections,
Civic and Associational Activities

PERSONAL NEWS



F. Robbins Lowe, vice-president and Southern agent for Saco-Lowell Shops, is now recovering at his home in Charlotte, N. C., from an operation performed April 7 at New England Deaconess Hospital, Boston, Mass. Mr. Lowe is expected to return to his office during May.

Dan M. Leister, superintendent of the Aragon Baldwin Mills' plant located at Rock Hill, S. C., has been appointed to assume the duties of William G. Stainton who resigned as general manager of Appleton Co., Anderson, S. C., according to an announcement made by Raymond G. Emery, executive vice-president of J. P. Stevens & Co., Inc., of which both named plants are divisions. Mr. Leister is a native of Walhalla, S. C. Upon his graduation from Clemson College as a textile engineer in the class of 1932, he became associated with Dunean Mills, Greenville, S. C., where he rose to the position of superintendent of preparation. In 1948, he was transferred to Rock Hill as superintendent of the Aragon Plant. . . . Lewis Acker, 28 years old, former Anderson High School star and a graduate of Anderson Junior College, assumed his new duties April 9 as recreational director for Appleton Co.



National Ring Traveler Co., Pawtucket, R. I., announces that M. L. (Johnny) Johnston, who has been associated with the firm since January of this year, has been assigned to the North Carolina and eastern Tennessee territory.

Mr. Johnston acquired a background in textiles by attending the North Carolina Vocational Textile School, Belmont, for a short time and later working for two years at Highland Park Mfg. Co., Mill No. 3, Charlotte, N. C. He has also received a diploma from the International Correspondence School for completing one of its textile courses. Mr. Johnston resides in Charlotte.

Carroll S. Anderson, who did the field layout work on the construction of the world's first commercial nylon plant at Seaford, Del., has been named field project manager to supervise construction at Kinston, N. C., of the first plant to manufac-

ture the Du Pont Co.'s Dacron polyester fiber, formerly known as Fiber V and Amilar. Mr. Anderson most recently has been in charge of expanding the Du Pont nylon yarn plant at Chattanooga, Tenn. . . . Recent changes in plant and personnel management organizations of the Du Pont rayon department include: Earl E. Swensson was transferred to Wilmington, Del., as special assistant on personnel, reporting to rayon division management, from manager of the Old Hickory, Tenn., rayon plant. F. Murray Acker, who had been manager of the Yerkes rayon plant, Buffalo, N. Y., was made manager of the Old Hickory plant succeeding Mr. Swensson. William H. Thalheimer, formerly manager of the New Brunswick, N. J., fine chemicals plant of the organic chemicals department, was appointed manager of the Yerkes plant to succeed Mr. Acker. Joseph L. Parrish was transferred from special assistant to the manager of the Martinsville, Va., nylon plant to personnel manager of the nylon division, Wilmington, succeeding Wanton E. Gladding who has been named manager of the new plant for making Dacron polyester fiber to be built at Kinston, N. C. . . . Russell C. Weigel, manager of one of the industrial sales sections in the polychemicals department, has been promoted to the position of assistant manager of the department's planning division. Mr. Weigel was in charge of sales to the paper, textile and leather industries. He has been succeeded by Jerry D. Shaw, formerly manager of the section handling sales to the wood, adhesives and rubber industries.

Charles A. Cannon, president of Cannon Mills Co., Kannapolis, N. C., was guest of honor recently at the 1951 North Carolina dinner in Charlotte, N. C., of the Newcomen Society of England which honored Cannon Mills. Mr. Cannon is chairman of the society's North Carolina committee. Principal speaker at the dinner was W. M. McLaurine of Charlotte, for many years secretary of the American Cotton Manufacturers Association.

C. N. Rice, formerly with Springs Mills, Inc., New York City, has joined Thomas Textile Co. as secretary-treasurer. In addition to his duties as secretary-treasurer, Mr. Rice will aid in determining policy of the firm's plant in Whitehall, Ga.

John R. Potter of the Boston office, Harry E. Martin of the New York office and H. Morgan Rogers, Jr., of the Spartanburg, S. C., office of Lockwood Green Engineers, Inc., have been made directors of the firm.

E. Erwin Schneider, Sr., president of Texco Chemicals, Inc., Atlanta, Ga., manufacturer of chemicals for the textile industry, has been named president of the Atlanta

Chapter of the Washington & Lee alumni association.

Linsley V. Dodge, vice-president of Berkshire Fine Spinning Association, has joined the Office of Price Stabilization as head of the fine combed cotton goods section of the textile division.

Ralph E. Case, William R. Kaelin and Mason H. Bigelow have been named directors of the Duplan Corp. to replace three directors who resigned. Mr. Case is a senior partner of Stevenson, Jordan & Harrison, Inc., management engineers. He has been a consultant for Duplan since 1924. Mr. Kaelin is a partner of Baker, Weeks & Harden, stock brokers. Mr. Bigelow is senior partner in the law firm of Gould & Wilkie, corporation counsel for Duplan. The three directors who resigned are Paul C. Debry, former company president, a chairman of the board, and a director for 33 years; Emil Buhler, former vice-president and a director for 42 years; and Albert R. Salembier, former secretary-treasurer and a director for 38 years.

Kenneth Collins, vice-president and merchandising co-ordinator of several Burlington Mills sales divisions, has been elected a director of The Advertising Council, Inc. The Advertising Council is a non-profit, non-partisan organization through which



Seated together at one of the business sessions of the recent American Cotton Manufacturers Institute convention were Richard R. Higgins (left) of Boston, Mass., who last month was elected president of the Kendall Co., and H. K. Hallett (right) of Charlotte, N. C., a Kendall director and vice-president of its Southern division. Mr. Higgins succeeds H. R. Lane, who in turn was elected chairman of the Kendall executive committee. H. P. Kendall was re-elected chairman of the board of directors, and L. H. Ballou, who previously was vice-chairman of the board, was named chairman of the Kendall finance committee. Mr. Higgins, who will continue to serve as treasurer, began his career with Kendall in 1922.



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PERSONAL NEWS

American business and all branches of the advertising industry annually contribute space, time and services valued at \$100 million in the interests of the public welfare, nationally and in communities throughout the country.

W. L. Foreman, chief copy writer for the National Cotton Council, recently was elected president of the newly-organized Memphis (Tenn.) Industrial Editors Association, a group whose goal is the improvement of standards of industrial editing in the mid-South area.

Miss Fanny P. Ivey has retired from Cone Mills Corp., Greensboro, N. C., after serving for 27 years as nurse for the Revolution Mill community and head of the first aid department at the mill. Marion W. Heiss, vice-president, cited Miss Ivey as a "potent and powerful element which has made the Revolution community rank above any other community or organization."

John W. Arrington, Jr., assistant treasurer and vice-president of Union Bleachery, Greenville, S. C., is serving as general chairman in Greenville County for the American Cancer Society drive for funds.

E. S. Tillingshast, superintendent at Union Bleachery, is serving as chairman for the drive in the City of Greenville. The drive will run through the month of April.

Oliver D. Landis, manufacturers' agent of Charlotte, N. C., sailed April 20 on the Queen Elizabeth for a month's tour of England and the Continent. Mr. Landis will attend the International Textile Exposition in Lille, France, following which he will visit Belgium, Germany, Luxembourg and

Switzerland. In France, he will inspect several of the tanneries from which he obtains the Hair-on leather used in the manufacture of check straps and other loom supplies.



Harry G. Andersen, heretofore district sales engineer at Milwaukee, Wis., for Link-Belt Co., has been appointed district manager at Birmingham, Ala., with headquarters in the Comer Building at 2100 Second Avenue

N. Mr. Anderson succeeds J. T. Bell, Jr., who has been called back into the service of the Army. Mr. Anderson started his Link-Belt career in 1937 at the company's plant in Chicago. He was transferred to Milwaukee in 1948.

Charles R. Schmitt, former lubrication manager for E. F. Houghton & Co.'s central and western division, has been named manager of the lubrication sales department and will work out of the firm's main office in Philadelphia. He joined the company in 1942.

Recently elected new directors of Cone Mills Corp., Greensboro, N. C., were Henry G. Nichols, formerly treasurer and director of Dwight Mfg. Co.; Jansen Noyes, former director of the Dwight firm, and Harold Smith, secretary and comptroller at Cone.

William P. Saunders of Aberdeen, N. C., president of Robbins Mills (N. C.) Inc., has been nominated to serve an eight-year term on the board of trustees of the Greater University of North Carolina. . . . Present members of the board nominated for new



LIBRARY TO CONE HOSPITAL. The Greensboro Academy of Medicine recently turned over its entire library of 788 volumes to the new Moses H. Cone Memorial Hospital, now a-building in Greensboro, N. C. The collection, built up over the past 11 years, is valued at \$6,000. Dr. Wayne J. Benton, left, president of the Greensboro Academy of Medicine, is shown here turning over the Academy's library to Herman Cone, right, president of Moses H. Cone Memorial Hospital board of trustees. In the rear are Dr. Joseph S. Lichy, hospital director, left, and Dr. Sidney LeBauer, right, Academy librarian.

terms were Charles A. Cannon of Cannon Mills Co., Concord, N. C., and A. H. London, treasurer of J. M. Odell Mfg. Co. at Bynum, N. C.



Walter E. Murray has been elected president of Crown Chemical Corp., Providence, R. I. For the past ten years Mr. Murray has been associated with Warwick Chemical Co., a division of Sun Chemical Corp., and resigned as vice-president and general manager of Warwick to accept his new post. His other previous connections include U. S. Finishing Co., Joseph Bancroft & Sons, Lincoln Bleachery and Pacific Mills.

T. Redmond Thayer has been appointed manager of high tenacity rayon yarn sales for American Enka Corp.

George Bolen, formerly with Howell-Willson Co. of Greenville, S. C., is now head of the warp preparation department at Borden Mills, Inc., Kingsport, Tenn.

L. A. Pettry has been promoted from second hand in carding and spinning to overseer of carding and spinning at Leward Cotton Mills, Inc., Worthville, N. C. Mr. Pettry succeeds J. H. McDonald, resigned.

J. W. Medford, for the past eight years treasurer of Springs Cotton Mills, Lancaster, S. C., has been elected executive vice-president of the firm. Mr. Medford succeeds H. R. Rice, who was executive vice-president a number of years. . . . Also advanced was J. C. Hubbard, who was named to succeed Mr. Medford as treasurer and was re-elected as secretary.

N. C. McCallister has been promoted from overseer of weaving to superintendent of Linda Cotton Mill, Cowpens, S. C.

W. M. Walker has been appointed sales manager of the wholesale industrial supply department of Montgomery & Crawford, mill supply firm of Spartanburg, S. C. Mr. Walker, who served in the Navy during World War II, comes to his new post from Crawford & Garner of Greer, S. C.

James W. Rankin has resigned as office manager at Firestone Textiles, Gastonia, N. C. Mr. Rankin had been associated with Firestone Textiles since 1935 and had been office manager since 1943.

A new dormitory for men now under construction at West Georgia College, Carrollton, Ga., will be called Aycock Hall in honor of the late J. A. Aycock, a former vice-president and general manager of Mandeville Mills in Carrollton. Mr. Aycock was one of the founders of the old Fourth District A. & M. School which was a forerunner of the present college.

Edwin R. Jerome recently was elected vice-president and general manager of Victor Ring Traveler Co., Providence, R. I. Mr. Jerome has been associated with the firm for 41 years.

Roy Hunt, Jr., associated with the stock and bond department of Alester G. Furman

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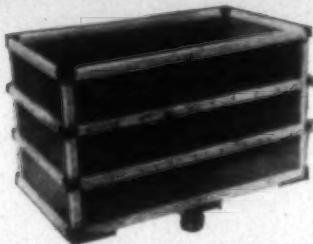
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PERSONAL NEWS

Co., Greenville, S. C., the past 4½ years, has been recalled to active duty as a first lieutenant in the Marine Corps Reserves. He reported to Quantico, Va., for his first assignment. . . . Mr. Hunt has been succeeded by Thomas N. Farr, formerly of Columbia, S. C., and Charlotte, N. C.

Culver Batson, formerly with Bladenboro (N. C.) Cotton Mills, is now in Washington with the National Production Authority, Industry Operations Bureau, textile division. Mr. Batson is working under Wyllys H. Taylor, former president of Newnan (Ga.) Cotton Mills, who is chief of the cotton branch of the textile division.

Henry Leslie of Leslie & Co., New York City, is now in Washington as a consultant with the Office of Price Stabilization. He is working with William Brayer, chief of the cotton section, textile branch.

Marcus W. Carter, formerly manager and vice-president, has been elected president of Hart Cotton Mills, Inc., Tarboro, N. C., succeeding Frank M. Leslie who has served as president for the past five years. Other officers elected are M. Weldon Rogers of St. Louis, Mo., vice-president; George R. Elmore, secretary and treasurer; Miss M. Gracie Boykin and E. C. Mueller, assistant secretary and assistant treasurer, respectively.

Richard Powell is manager of the new development finishing plant of Burlington Mills Corp. at Greensboro, N. C., which last month went into full production.

Andrew L. Tait, president and owner of Tait Yarn Co., Inc., Lincolnton, N. C., has been named outstanding Kiwanian for 1950 by the Lincolnton Kiwanis Club. Mr. Tait will be recognized and presented a medal at the Ladies Night meeting of the club to be held early in May.

John M. Geer, purchasing agent for Fieldcrest Mills, Spray, N. C., last month was re-elected a Leaksville (N. C.) Township School Board trustee for a term of five years.

James D. Wise, president of Bigelow-Sanford Carpet Co., has been elected president of Hartford Rayon Corp. succeeding William Steinschneider. Bigelow-Sanford is the major holder of Hartford Rayon securities. Other officers elected are John A. Donaldson, vice-president and treasurer; Robert B. Freeman, vice-president; Rodney Piper, secretary and assistant treasurer, and Katherine A. McCarthy, assistant secretary. Four new directors named are Mr. Wise, Mr. Donaldson, Mr. Freeman and W. N. Freyer.

Major Samuel A. Steere, Jr., son of S. A. Steere, vice-president in charge of textile mills of Goodyear Tire & Rubber Co., was decorated recently in Tokyo, Japan, for outstanding Air Force service.

F. G. Revels, formerly first shift overseer of Stafford and cam looms in the weave room of Plant No. 1 of Mooresville (N. C.) Mills, has succeeded L. P. Dorton as overseer of all three shifts of weaving at the plant. Mr. Revels has been succeeded in

his former post by Clyde Morrow, who was promoted from second shift overseer of Stafford and cams. Mr. Morrow, in turn was succeeded by Bill Pruitt, who was promoted from the first shift as second hand, and Mote Morris, formerly loom fixer on the first shift, was named to succeed Mr. Pruitt as first shift second hand.

A. H. Thomas, superintendent of Burlington Mills Corp. Flint No. 2 plant at Gastonia, N. C., recently completed five years with the firm and was presented an appropriate service pin by Division Manager Frank Asbury.

Hector C. Borghetti has been named to the newly established post of assistant manager of the Rohm & Haas textile chemicals department. He will be in charge of product development.



Louis J. Francisco, New York sales manager for the past 11 years, is the new vice-president in charge of sales and advertising for Formica Co., Cincinnati manufacturer of laminated plastics. Mr. Francisco began his business career with Formica in 1924 as a factory hand. He was named to the company's Chicago sales force in 1925; transferred to the New York office in 1927 he became manager there in 1940.

William Hoch, a former executive of Whitin Machine Works, recently resigned as a textile and fiber consultant with the National Security Resources Board to join the Office of the Army Quartermaster General.

Kenneth H. Klipstein is on leave from his duties as assistant general manager of the technical department of Calco Chemical Division of American Cyanamid Co. to serve as deputy director of the chemical division of the National Production Authority. As deputy director of the N.P.A. chemical division he will assist in carrying out its policy of insuring supplies of critical materials for defense and defense-supporting needs with the least possible displacement to civilian industry.

John P. Batson, manager of Batson Mfg. Co., Greenville, S. C., announced March 26 that he will be a candidate in Greenville municipal elections this Summer for re-election to his third two-year term on the Greenville city council.

Newly named Allis-Chalmers general machinery division sales representatives to four Southern states are John E. Watson to the company's Birmingham district office; James P. Boger, Charlotte; Stephen Hogg, Jr., Atlanta, and Wilson O. Vaughn, Richmond. Mr. Watson and Mr. Hogg are electrical engineers and Mr. Boger and Mr. Vaughn mechanical engineers. All joined Allis-Chalmers in 1949 upon completing college and have finished the company's graduate training course.

Ira S. Teat has resigned as general manager of Troy Whitehead Machinery Co., Charlotte, N. C., and has accepted a similar

post with C. L. Upchurch & Sons, textile machinery and supply dealers with headquarters in Athens, Ga. Mr. Teat has been connected with the textile machinery business for the past 16 years.

Troy E. Hill has been made spinning room foreman at the Dixon Plant of American Yarn & Processing Co. in Gastonia, N. C. Mr. Hill has been associated with A.Y.P. for two years and formerly was connected with Sterling Spinning Co., Belmont, N. C. . . . George Tyser, who joined A.Y.P. in February, has been appointed foreman of carding and spinning on the third shift at the Madora Plant in Mount Holly, N. C. Mr. Tyser, formerly in the insurance business, is a graduate of the North Carolina Vocational Textile School in Belmont.

Harold Edwards, for the past year spinning room second hand at Plant No. 2 of Goodyear Clearwater Mills in Rockmart, Ga., has been promoted and is now third shift superintendent at Plant No. 3 at Cartersville, Ga.

Frederick L. Eckstrand has resigned his position as director of sales of Borne Scrymser Co. of Elizabethtown, N. J., and Charlotte, N. C., to enter private business. He will be available for consultant services and will be located at 926 Carleton Road, Westfield, N. J.

Christopher C. Baldwin, former partner in Woodward, Baldwin & Co., textile mill selling agents of Baltimore, Md., and New York City, has joined the Office of the Quartermaster General, Washington, as a consultant on wool textiles.

Herman Goldstein has been appointed manager of production and development for Warwick Chemical Co., a division of Sun Chemical Corp. Mr. Goldstein has been with Warwick seven years and is the author of several notable papers on textile chemistry. . . . S. Y. Stribling has been appointed sales manager of Suntone pigment colors for Warwick. Mr. Stribling formerly was Southern service manager of Suntone pigment colors and prior to that was associated with Southern Bleachery & Print Works for many years.

Jack Welborn has been promoted from overseer of finishing to an assistant superintendent at the dyeing and finishing plant of Riegel Textile Corp., Trion (Ga.) Division. Mr. Welborn, who has been with Riegel as overseer for five years, also is the newly-elected vice-commander of V.F.W. Mason-McCauley Post 6688 and a past director of the Community Foundation. . . . D. C. Alexander, who has been with Riegel since 1938, was advanced to fill the overseer vacancy, succeeding Mr. Welborn.

C. B. Bricker, assistant purchasing agent at the Trion (Ga.) Division of Riegel Textile Corp., recently was elected commander of the Mason-McCauley Post 6688, Veterans of Foreign Wars, in Trion. Mr. Bricker has been associated with Riegel for about 16 years.

R. Arthur Spaugh, Jr., formerly vice-president, has been elected president of Washington Mills Co., Winston-Salem,

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PERSONAL NEWS

N. C., succeeding Agnew H. Bahnsen, Sr., retired. Mr. Bahnsen retired April 1 after 50 years in the textile business in North Carolina. . . . Charles H. Reid, secretary, and E. F. Tullock, treasurer, were elected vice-presidents in addition to their present offices, and S. R. Bason, auditor, was advanced to assistant treasurer.

G. H. Williams has left his position as overseer of weaving at Dover Mills Co., Shelby, N. C., and is now superintendent at A. Schottland, Inc., Rocky Mount, N. C. . . . C. Hall, previously associated with Textron Southern at Hartwell, Ga., is now overseer of throwing at Schottland.

Bill McKemie, supervisor of the cost department of Avondale Mills, Sylacauga, Ala., recently was elected president of the Sylacauga Rotary Club for the 1951-52 term.

Clyde E. Crocker, office and personnel manager at Riverdale Mills, Enoree, S. C., has been elected president of the Woodruff (S. C.) Rotary Club. Mr. Crocker, who has been associated with Riverdale Mills for 22 years, also is mayor of Enoree and trustee of the District 11 schools of Spartanburg County.

Robert E. Worden of Worden & Risberg, Philadelphia, consulting management engineers and industrial managers, will serve as general manager of the new fiber glass division of Libbey-Owens-Ford Glass Co. during its development. . . . Donald L.

McClure, associated with glass operations at the Rossford, Ohio, plant of L.O.F. for 15 years, is the factory manager for the new division plant in Parkersburg, W. Va. . . . Clinton F. Hegg, assistant to the general manager of industrial sales for L.O.F., has been transferred to the new fiber glass division as sales manager. Mr. Hegg will have his offices in the Wayne Building, Toledo, Ohio.

William J. Brooks, a native of Red Springs, N. C., and a graduate of the School of Textiles at North Carolina State College, recently was appointed assistant to A. U. Priester, Jr., vice-president and general manager of the HDV division of Callaway Mills Co., LaGrange, Ga. Mr. Brooks joined the HDV trainee program in July, 1949, and worked at the Valway Plant, first in the dye house and, prior to his promotion, as production supervisor. . . . Howard L. Lester, who first went to work with Callaway in 1926, has been promoted from production clerk to overseer of production at the Valway Plant. . . . Robert Walburn, overseer at the Rockweave Plant of the MMC division in LaGrange, March 21 completed 25 years of continuous service with the firm. He was presented a 25-year emblem and a jeweled engraved watch.

An annual research professorship in chemistry has been established at Harvard University by the Du Pont Co. in honor of the inventor of nylon, the late Dr. Wallace Hume Carothers, who headed the research group which created nylon in the company's broad, fundamental research program. The

professor holding the appointment to this position each year will be freed from all other teaching and administrative duties at the university in order to spend his time entirely on the direction of research in chemistry at the post-graduate or post-doctoral level. Du Pont is making an annual gift of \$15,000 for five years to the university to support the professor and his research.

OBITUARIES

Edgar Hayes Betts, 73, president of Cluett, Peabody & Co., Inc., from 1914 until his resignation in July, 1929, died March 27 at a hospital in Troy, N. Y. At the time of his death he was a partner in Betts & Morris, investment brokers of Troy, and a vice-president of Troy Record Co. Surviving are two daughters and two sons.

James W. Bingham, retired textile executive of Hickory, N. C., died recently after an illness of several months. Mr. Bingham retired several years ago as an official of Quaker Meadows Mill, and after that he and his son, Irving, operated Bingham Hosiery Mills, which has since been discontinued. Surviving, in addition to his son, are his wife, three daughters and three sisters.

W. E. Bradley, Sr., 70, maintenance superintendent at Whittier Mills Co., Chattahoochee, Ga., died March 14 at his home in Chattahoochee. He had been connected with the mill for 49 years. Surviving are his wife, three sons and one brother.

James Willis Hay, 82, who for many years had an interest in Dallas (Ga.) Hosiery Mills, Inc., died March 15 at his home in Dallas after an illness of several months. He was for many years a leading cotton buyer in Dallas and was one of the organizers of a cotton mill in Dallas.

William J. Iselin, 43, vice-president and treasurer of Woodside Mills, Greenville, S. C., and vice-president of Iselin-Jefferson Co., Inc., New York, and **John F. Dwyer**, 34, a supervisor at the Woodside plant in Simpsonville, S. C., were killed April 10 when their airplane crashed near Vienna, Va. Mr. Dwyer was pilot of the single-engine plane. Bennett S. Rose, also a vice-president of Woodside and Iselin-Jefferson, was seriously injured in the crash and was hospitalized in Arlington, Va. They were en route to Providence, R. I. Mr. Iselin is survived by his wife, three sons, two daughters, and his parents. Mr. Dwyer is survived by his wife, a son and a daughter, and his mother.

William J. Kennedy, Jr., 51, of Atlanta, Ga., for the past 20 years associated with Anderson, Clayton & Co., died recently at his home in Atlanta. Surviving are his wife, one son and a brother.

John A. McFalls, 70, manager of Beaufit Mills, Inc., Rockingham, N. C., died April 6. Mr. McFalls was for many years connected with the Ranlo chain of mills in Gaston County, N. C., and with Morgan Cotton Mills near Laurinburg, N. C., before coming to Rockingham in 1935, to become

APRIL • 1951

CARD CLOTHING NEWS

and views

WRITTEN MONTHLY BY E. A. SNAPE, JR., PRESIDENT **Benjamin Booth Company** PHILA. PA.

THE SURE WAY TO KNOW WHAT **STRIP-O-MATIC*** WILL DO FOR YOU . . . TRY IT:

If you are not now using STRIP-O-MATIC, the revolutionary card clothing that reduces stripping to a minimum to effect tremendous savings, I urge that you test it yourself to learn just how much superior it is to all other card clothing.

I could—and have—related its many advantages to you (more than 200 plants have taken me up on it), but the one sure way for you to know its advantages is to try it in your plant. Of those plants now using STRIP-O-MATIC, repeat orders are a daily occurrence. That shows us what users think of this amazing clothing.

To point out a few "savings" resulting from less stripping, possibly the greatest are savings in "man-hours," less waste, and greater production because "down time" becomes "production time."

At the same time—you card better, are able to make a better product.

I cannot insist strongly enough that you try STRIP-O-MATIC.

Your inquiry will receive prompt attention.

Thanks.

Sincerely,

E. A. Snape, Jr.,



President,

Benjamin Booth Company

Allegheny Ave. and Janney St.,
Philadelphia, Pa.

*Pat. and Reg. in U. S. A.

Representative
OLIVER D. LANDIS, INC.
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Division) for Virginia, North
Carolina, South Carolina

associated with Entwistle Mills. He was in charge of Entwistle's No. 2 Plant when the Rogosin interests bought the property in 1943 and changed the name to Beaunit Mills. He remained with the new owners as manager. Surviving are his wife and an adopted daughter.

Charles E. Oram, 79, retired president of James H. Billington Co., bobbin and shuttle manufacturing firm of Philadelphia, Pa., died March 29.

Charles W. Phillips, 64, retired textile executive of Greensboro, N. C., died April 1. Mr. Phillips was superintendent of one of the Marshall Field plants at Leaksville, N. C., for 23 years before moving to Greensboro 15 years ago. Surviving are his wife, a son and daughter, two brothers and two sisters.

Daniel C. Robertson, for many years head of the shipping department at Republic Cotton Mills, Great Falls, S. C., until his retirement about two years ago, died March 30. Mr. Robertson was widely known in South Carolina Masonic circles and was a past grand high priest of the South Carolina grand chapter. He is survived by his wife, a daughter and a brother.

Stamey W. Smith, 76, retired textile executive of Gastonia, N. C., died April 9. Mr. Smith was for 57 years active in the textile industry. In 1885, at the age of 11, he took his first job as a sweeper in the newly-built McAden Mill at McAdenville, N. C. During his long career he served with a number of plants in the Gaston County area. At the time of his retirement in 1942 he was superintendent of the Seminole plant of Textiles, Inc., in Gastonia. He is survived by his wife, one daughter, two sons, one brother and two sisters.

Floyd C. Todd, 59, president and treasurer of F. C. Todd, Inc., Gastonia, N. C., textile machinery and supply firm, died April 9 at his home in Gastonia. Mr. Todd also had an interest in the Todd-Smith Banding Co., the Todd-Long Picker Apron Co. and the Rawlings-Todd Co. Before entering business for himself in 1927, he sold and installed textile machinery and also served as superintendent of Ruby Cotton Mills and Boyce Weavers' Knitter Co. He was active in numerous civic and religious groups and was elected to the Gastonia city council in 1941 and 1943. Surviving are his wife, one daughter and two brothers.

Thomas L. Wilson, 56, president of Bowling Green (S. C.) Spinning Co. and long prominent in Gaston County, N. C., textile circles, died March 30 at his home in Gastonia, N. C. Mr. Wilson shortly after World War I joined the old Ruby Cotton Mills as secretary and treasurer and served in that capacity until 1946 when the plant was acquired by the U. S. Rubber Co. Since 1946 he has been president of Bowling Green Spinning Co. Surviving are his wife, a son and daughter, one brother and two sisters.

Norris N. Wright, 64, president of Continental Diamond Fibre Co., Wilmington, Del., died March 27 at his home in Newark, Del. He had been ill since the first of the year.



High grade gas, by-product, steam and household stoker coal from Wise County, Virginia, on the Interstate Railroad.



High grade gas, by-product, steam and domestic coal from Wise County, Va., on the Interstate Railroad.



High grade, high volatile steam and by-product coal from Wise County, Va., on the Interstate Railroad.



A laboratory controlled product blended to meet exacting stoker requirements. From Wise County, Va., on the Interstate Railroad.



The Premium Kentucky High Splint unmatched for domestic use. Produced in Harlan County, Kentucky, on the L. & N. Railroad.



Roda and Stonega from Wise County, Va.



High grade gas, by-product, steam and domestic coal—Pittsburgh seam from Irwin Basin, Westmoreland County, Pennsylvania, on the Penna. Railroad.



High volatile domestic, steam and by-product coal from Boone and Logan Counties, W. Va., on the Chesapeake & Ohio Ry.



Genuine Pocahontas from McDowell County, W. Va., on the Norfolk & Western Railway.



High fusion coking coal for by-product, industrial stoker and pulverizer use from Wyoming Co., W. Va., on the Virginian Ry.

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GREENSBORO

...

NORTH CAROLINA

CLEVELAND, TENN.—A new corporation is to be formed soon to operate the cloth manufacturing division of Hardwick Woolen Mills, Inc. All machinery of this department, 15 cards and 60 looms, has been purchased by John L. Hutcheson, Jr., and Lewis Hutcheson and operating space leased in the Hardwick plant. John L. Hutcheson, Jr. is president of Peerless Woolen Mills, Rossville, Ga., and Lewis Hutcheson is vice-president and sales manager. Peerless, however, is in no manner connected with the transaction and will have no part in the new corporation, it was emphasized.

GAFFNEY, S. C.—Gaffney Mfg. Co., a division of Deering, Milliken & Co., honored two veteran employees recently by giving them an all-expense paid trip to New York City. Making the trip were Guy C. Meredith, an overseer in the cloth room and with the firm 41 years; and Guilford S. Melton, master mechanic, a veteran of 34 years with the concern.

WOONSOCKET, R. I.—Woonsocket Worsted Co. last month revealed that it plans to move part of its operations to the South. Edwin A. Farnell, Jr., president, stated that plans call for a move to South Carolina, but declined to reveal the exact location in that state.

ANNISTON, ALA.—Anniston Yarn Mill, a division of Southern Mills Corp., has been sold to F. F. Phillips & Associates of Siluria, Ala. Mr. Phillips is president of Buck Creek Cotton Mills, Siluria, and Valley Mills of Columbiana, Ala. The plant operates approximately 6,000 spindles and employs about 125 persons. The mill is now running three shifts, producing high grade yarns for the knitting and weaving trade.

SANFORD, N. C.—Burlington Mills Corp. recently announced plans for construction of a synthetic yarn weaving plant on a 113-acre site here. The new plant will employ about 1,400 persons, it is reported. Residents of the city have agreed to build 100 houses for company employees.

BURLINGTON, N. C.—Celanese Lanese Corp. is undertaking an expansion program calling for the erection of an additional building and the installation of new production machinery. Forrest M. Davidson, manager of the local acetate spun yarn plant, declared March 26. Work on the project is to get underway immediately, and it contemplated that the program will be completed shortly after the middle of the year. "A contract for the building construction," Mr. Davidson continued, "has been let to the Hughes-Foulkrod Co., which has made application for the necessary permits. The proposed building which will be of reinforced concrete, was designed by the central engineering department of Celanese Corp. of America. The additional production equipment to be installed in the new extension will bring about some increase in the present plant payroll. When the building program is completed Celanese Lanese Corp. will augment its present technical

control activities by establishing a fully equipped research and development department for evaluation work on staple fibers and spun yarns.

HENDERSON, N. C.—Work is now under way on a \$2,000,000 expansion and modernization program at Henderson and Harriet Cotton Mills. Officials estimate that more of the money will go into new machinery than into actual structural work.

GASTONIA, N. C.—A \$65,000 addition is under construction at the Osceola Plant of Textiles, Inc. There will be no new equipment purchased, it was explained; the addition is being built to provide more working space for the present equipment.

COLUMBIA, S. C.—Bids were received recently for construction of an addition to the basement of Columbia Mills.

ALABAMA CITY, ALA.—Dwight Mfg. Co. here has been merged with Cone Mills Corp. of Greensboro, N. C. The merger involved a stock transfer of approximately 24 million dollars. Dwight Mfg. Co. utilizes 88,632 spindles and 2,340 looms in the manufacture of sheetings, drills, twills, satins and osnaburgs.

GREER, S. C.—Employees of the Victor Plant of Victor-Monaghan Co. were cited recently for having completed a million man-hours of work without a lost-time accident.

NORFOLK, VA.—Controlling interest in Aberfoyle, Inc., wholly-owned subsidiary of Aberfoyle Mfg. Co., Philadelphia, Pa., has

been sold to David Seidman and Myron Alexander of New York City. It is reported in trade circles that sale of the two-story building and equipment, including some 300 looms, signifies Aberfoyle's withdrawal from the weaving field. The new owners, who are textile mill operators and converters, plan to continue the weaving firm as part of their own operations.

LEXINGTON, N. C.—Installation of 120 new S6 looms is currently under way at the rayon plant of Frank Ix & Sons here. The new looms are expected to be in place late in May, bringing the plant total to 408. There are now 20,000 spindles in the plant.

GREENVILLE, N. C.—Art Loom Carpet Co. of Philadelphia, Pa., has purchased all the outstanding stock of Greenville Mills, Inc., and will operate the plant as a wholly-owned subsidiary. In its new facility, Art Loom will process yarns for blankets and carpets.

ROANOKE, VA.—American Viscose Corp. is awaiting government approval before beginning a multi-million dollar expansion program at its plant here. The Roanoke plant produces about 15,000,000 pounds of tire fabric annually, in addition to rayon yarns.

MILLEDGEVILLE, GA.—The former Naval Ordnance plant here now being operated as a worsted plant by M. T. Stevens Southern, a subsidiary of J. P. Stevens & Co., Inc., has been offered for sale by the General Services Administration, Public Buildings Serv-



THE WORK OF THE CALLAWAY MILLS CO. RESEARCH DIVISION was dramatized in an original skit similar to the play, "Our Town" by Thornton Wilder, at a meeting of the LaGrange Rotary Club. Shown above is a part of the equipment set up for the meeting, including a wool sorter to determine the fiber length and distribution of wool; the gauge tester, crimp tester, and yarn evenness tester. Also shown in the photo is a part of the staff of the research division, left to right, Robert Gross, Wilford Keeble, Ruth Davis and Mrs. Hooper Knight.

MILL NEWS

ice, 50 Whitehall Street, Atlanta, Ga., subject to the Stevens lease. The lease has a recapture clause and also a 120-day general cancellation clause.

SPARTANBURG, S. C.—Spartan Mills has been granted tax write-off benefits by the Defense Production Administration on two new facilities for manufacturing cotton duck. One of the two approved projects will cost an estimated \$334,638 and the other \$379,654.

ROCKMART, GA.—Goodyear Clearwater Mills at Rockmart and Cedartown, Ga., have contributed \$5,000 to the Sarah Murphy Fund for rebuilding the home for Negro children destroyed by fire last December.

HOPEDALE, N. C.—The new \$1,500,000 plant of Copland-Fowler Industries, Inc., which began operations last month, is now in full production. The facility utilizes 224 64-inch looms in the production of material for women's lingerie.

ELKIN, N. C.—Chatham Mfg. Co., for the second successive year, has broken its own record-breaking safety record. Chatham had only seven lost-time accidents in 1950 as compared with nine in 1949, also a record-breaking year. The accident frequency rate in 1950 was 1.23, compared with 1.63 in 1949. The average frequency rate for woolen and worsted plants in the United States during 1949 was 13.3.

SCHOOLFIELD, VA.—Excavation work has been completed for Dan River Mills' new \$3,500,000 addition at its Schoolfield Divi-

sion. The new facility is not expected to be ready for use prior to 1952, however.

GRIFFIN, GA.—A hospitalization and surgical insurance plan for Dundee Mills, Lowell Bleachery and Rushton Mills became effective March 4. Underwritten by the Provident Life & Accident Insurance Co. of Chattanooga, Tenn., the broad coverage is extended to the group's 3,100 employees and their dependents on a voluntary basis. It is estimated that approximately 7,000 individuals are insured under this policy. The premiums will be jointly paid by the employees and the participating mills, with the latter handling the administration. Miss Mattie Myrl Statham will direct the program from the main office at Experiment, Ga. The response to the program has been excellent, with over 98 per cent of the employees of the three companies subscribing. The management feels that this is a forward step in employee and community relations.

HENDERSON, N. C.—The new \$1,500,000 plant of Belding Corticelli, now under construction at Hendersonville, will be the first thread manufacturing plant employing electronic control at all focal processing points. Many thousands of electronic tubes will control the flow and quality of the bonded monofilament sewing threads which will be produced at this plant by a processing method developed and used exclusively by Belding Corticelli. Chances for human error will be virtually eliminated by the application of this electronic system. The plant, which will be completed by the Summer of this year, is constructed of selected brick and insulated aluminum panel walls built

around a structural steel frame. An exterior decor of thermo-pane glass will provide comfort and light, at the same time blending with the environmental surroundings. The interior of the plant will be completely air conditioned and fluorescent illuminated. Concrete flooring and automatic dust eliminating devices will keep all processing areas free of lint and contamination. Ample rest-rooms and sanitary facilities, canteens and infirmaries will be spotted throughout the building. Heating and power will be derived from the use of petroleum and liquid propane.

NEW BRAUNFELS, TEX.—Pioneer Worsted Co. of New Braunfels soon will be operating one of the few worsted weaving mills in the South. Addition of looms to Pioneer's \$1,800,000 scouring and spinning plant will provide the Texa's wool industry its first manufacturing unit for converting home-grown raw materials into fine worsted fabrics for the retail trade. Robert E. Pent, president of the company, states, "We intend to have eight looms in operation within six months. We're going to weave fine fabrics for men's suits and women's wear. We're going into worsted weaving on a modest scale but we plan a steady increase of our weaving facilities."

BOSTON, MASS.—On Feb. 1, directors of the Pepperell Mfg. Co. declared a quarterly dividend, payable to stockholders Feb. 15, marking the 100th consecutive calendar year in which this company has paid a dividend. As one of the few American manufacturing companies to have remained in business for over a century, and as one of the still fewer textile manufacturing concerns to operate continuously for that length of time, Pepperell is believed to be the only manufacturing enterprise in the country, the stock of which is broadly owned by the public, to have an unbroken dividend record for 100 calendar years.

PROVIDENCE, R. I.—The annual report of Textron, Inc., released March 29, reveals that the firm has completed plans for construction of two new weaving mills. The report did not state where the plants would be located.

SWEPSONVILLE, N. C.—Employees and management of Virginia Mills, Inc., at a dinner meeting March 29 in the Swepsonville Community Center, were presented a bronze plaque by the Textile Insurance Co. of High Point, N. C., in recognition of the plant's safety record of operating more than 5,500,000 man-hours without a lost-time accident. T. A. Wilson, president of the insurance company, presented the plaque to Walter M. Williams, executive vice-president of Virginia Mills. This outstanding safety record was established during the period from Feb. 13, 1948, to Jan. 1, 1951.

CORDOVA, ALA.—A planned \$2,400,000 expansion program at the Cordova plant of Textron, Inc., has been abandoned by the firm "in view of the strike called by the Textile Workers Union of America, C.I.O."

BOILING SPRINGS, N. C.—A two-story addition to Marion Yarn Mill, which will add 9,000 square feet of floor space and enable a switch from production of carded

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to combed yarn, is scheduled for completion about May 1. Production is being boosted to 18,000 pounds per week as a result of improvements being made in plant layout and mechanical equipment.

ROCK HILL, S. C.—The Celanese Corp. of America is planning construction of a new cellulose acetate plant near here to cost about \$25,000,000. This was revealed in an announcement by the Defense Production Administration, Washington, that Celanese has requested tax benefits covering new plant facilities to cost more than \$25,000,000. The firm's request however, had not been acted upon at a recent date. In the meantime, construction of the great acetate staple fiber plant of Celanese near Rock Hill is progressing rapidly and this addition to the Celriver filament producing plant is scheduled to come into production late this year.

SPRAY, N. C.—Plans for moving the rayon mill into the former woolen mill building have been announced by officials of Fieldcrest Mills. Plans are to move the machinery while the mills are standing for the annual vacation period this Summer. The rayon mill operates 404 looms. The former woolen mill building will be modernized to the equivalent of a new building from a manufacturing and employee-convenience standpoint. A new boiler plant to serve various units of Fieldcrest Mills is under construction at the site of the old Nantucket boiler room. A modern steam boiler will replace the present older type boilers at Nantucket and the finishing mills. The two old boilers at Nantucket will be discarded but the finishing mill units will be left in place. The Nantucket boiler will be the largest in use at Fieldcrest. It will provide steam for both heating and processing.

MURPHY, N. C.—Trade circles report that Duffy Silk Co., Buffalo, N. Y., is planning construction of a throwing plant near Murphy. Construction of the new facility is expected to get under way soon.

SUMMERTIME, GA.—Bigelow-Sanford Carpet Co. recently announced plans for construction of a \$500,000 addition to its subsidiary, Georgia Rug Mill, making it the largest rug mill in the South. The addition is expected to be completed this Summer.

FALL RIVER, MASS.—American Thread Co. April 6 announced plans for transferring its yarn sales department from Fall River to a new plant to be constructed soon at Sevier, N. C. The company advised employees that the earliest date the department could be moved would be about June, 1952.

WHITNEY, S. C.—Pequot Mills is now in operation and early in April shipped its first carload of sheets. The plant is expected to be in full production within the next few weeks.

LAURENS, S. C.—Palmetto Worsted Mill plans soon to begin work on a new \$100,000 plant here. The firm plans to lease the building formerly occupied by Hallmark Mfg. Co. and to build an addition that will double the existing floor space, making a total of 7,000 square feet. W. Fred Davis, president and treasurer of Palmetto Spin-



When a caster which has been on the market for only a little over a year is adopted as original equipment on many of the finest textile trucks . . . when it is bought—exclusively—by many of the most progressive mills . . . there must be a reason. Below are a few of WIL-MAT Casters advantages:

1. Super-Smooth Action

Twin heavy steel ball bearings, in thrust type hardened natural raceways make this the freest spinning caster on the market.

2. 30% to 40% More Tread

This heavy drawn sheet steel means far longer service and reduced costs.

3. Floor-Protecting Tread

WIL-MAT's curved chip-proof bevel cannot wear to sharp edges . . . will not cut or gouge floors. Its sheet steel tire will not pick up grease, oil, or grime to track-up floors.

4. Great Strength

Heavy and accurately machined parts give WIL-MAT Casters exceptional carrying capacity and long life.

✓ ... And They Won't Clog Up

Heavy sheet steel Tire

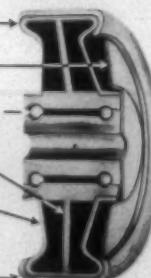
Very close-fitting threadguard

Twin heavy-duty thrust-type ball bearings

Heavy sheet steel Center Support

Heavy-duty die-stamped steel Discs

Curved chip-proof bevel that can never wear to a sharp edge



WIL-MAT CASTERS
RIGID OR SWIVEL
WILKIN & MATTHEWS—Charlotte, N. C.

MILL NEWS

ning Corp., will be vice-president of the new company. The two companies will be entirely separate, however.

MARSHALL, N. C.—The old Marshall Cotton Mill property has been sold to Frank Coxe, Asheville, N. C., businessman, for a price said to be about \$25,000. The property was purchased from John H. Smith, Robert L. Dawson and A. F. Burgess, all executives of Beacon Mfg. Co. It is believed that cotton mill interests may utilize the property for mill purposes soon.

BALFOUR, N. C.—An expansion and remodeling program currently under way at Berkeley Mills, Inc., will put the mill in the 1,000-loom class. At present the plant utilizes 28,000 spindles and about 500 looms, employing 400 persons. The addition under construction is expected to be completed by the first of the year. It will double the present production capacity and will increase employment by about 50 per cent.

GREENSBORO, N. C.—Burlington Mills Corp. has borrowed \$30,000,000 from the Equitable Life Assurance Society of the U. S. and the Metropolitan Life Insurance Co. Payments on the loan will begin April 2, 1960, and will run to maturity on that date in 1970. The money will be used in

a continuing program of expansion. Kidder, Peabody and Co. acted as representatives for Burlington Mills.

HANES, N. C.—Bidding was started April 12 for alterations and additions to Mill No. 4 of P. H. Hanes Knitting Co.

GREENVILLE, S. C.—Two new Greenville textile concerns were granted charters March 22, Langley Engraving Co., Inc., capitalized at \$2,000, was chartered to bleach, dye, print, process, engrave and prepare for use textile fabrics, yarns, threads and fibers. Burnet R. Maybank, Jr., is listed as president of the concern. Langley Processing Co., Inc., with capital stock of \$2,000, was chartered to engage in bleaching, dyeing, printing, processing, engraving and finishing textile fabrics, yarns, threads and fibers. Thomas K. Johnstone, Jr., heads the firm as president.

CHARLOTTE, N. C.—Moore Textile Co. last month completed conversion of 20 of its 90 looms for the production of cotton duck. The plant is now weaving 9.85-ounce goods.

BISHOPVILLE, S. C.—The new rayon finishing plant of Reeves Bros., Inc., to be constructed here has been named Bishopville Finishing Co. The new Bishopville plant will be the most modern plant of its type in the country, all brick and steel construction, and will contain the latest equip-

ment. It will specialize in the finishing of year-round and Summer weight rayon suitings and will primarily be engaged in finishing the rayon gray goods produced in the recently and completely renovated Reeves Bros. Osage Mill at Bessemer City, N. C. This is the third Reeves wholly-owned finishing plant. The first was completed in 1930 and is known as the Fairforest Finishing Division. It is located in Spartanburg, S. C. The second is the finishing plant at Columbus, Ga., connected with the Eagle & Phenix Division, which was acquired in 1947. Along with the new rayon operations at Osage and Bishopville, Reeves Bros. wholly-owned cotton spinning and weaving mills are located in Spartanburg, Greenville, Woodruff and Chesnee, S. C., in Rutherfordton, N. C., and in Columbus, Ga. The personnel employed by Reeves Bros., Inc., now totals approximately 6,800 workers.

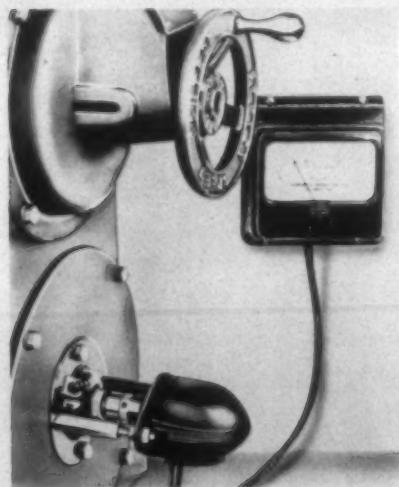
SUMMERTON, GA.—Rhocot, Inc., has been granted a charter to produce cotton, nylon, wool and synthetic fiber products in Chattooga County. Principals are listed as Henry J. Fullbright, Jr., George Home and H. C. Duffey, Jr.

MONROE, GA.—Monroe Cotton Mills has completed installation of three new Saco-Lowell pickers with pneumatic lap lifts. Two other pickers will be installed soon. The mill is completing installation of a new opening room.

For The Textile Industry's Use

EQUIPMENT — SUPPLIES — LITERATURE

Reeves Electric Tachometer



In response to the demand for an inexpensive tachometer for use with Reeves variable speed transmissions and Reeves variable speed motodrives, when they must be mounted in inaccessible or remote locations, the Reeves Pulley Co., Columbus, Ind., has now added a new electric tachometer to its line. The new tachometer is comparable in price

to the previously offered mechanical type, and is more accurate; for that reason, the mechanical tachometers have been discontinued. This electric tachometer, which operates on the a.c. generator principle, also allows more flexibility in installation, since the indicator may be mounted as far as 300 feet from the variable speed drive. The new tachometer has been designed especially for quick and easy installation on Reeves variable speed drives, in capacities from one-quarter to 87 h.p., already in service; for most installations, no alteration of any existing parts will be necessary. The ability to operate accurately at long distances from the variable speed drive makes the new tachometer an excellent instrument for use with the Reeves electric remote control. Send for descriptive Bulletin G-511.

Tensitrol Open Width Washer

Rodney Hunt Machine Co., Orange, Mass., recently announced a new application for its revolutionary Tensitrol washers. The firm reports that several leading manufacturers of rayon suitings are now using Tensitrol open width washers for washing resin-treated rayons after curing—with highly successful results. These manufacturers have found that their Tensitrol washers have eliminated all need for rope washing at

this point, since Tensitrol will wash the fabric at high speed with full relaxation and top washing efficiency.

The advantages of open width continuous processing following the curing stage of processing rayons are many, and manufacturers had long hoped that such a method could be developed. Exhaustive tests proved that Rodney Hunt Tensitrol open width washers would do the job every bit as well as rope washing in a beck. One of the tests was conducted as follows: A sufficient yardage of spun rayon shirting was padded with the proper chemicals, dried, and cured at the pilot plant of the firm conducting the trials. Half of the fabric was then taken to a rayon finishing plant where a three-box Rodney Hunt open width Tensitrol washer was available. The fabric was washed through this machine using detergent and alkali in the first two boxes and rinse in the third. The other half of the fabric was retained at the pilot plant where it was washed thoroughly in a dye beck in batch form. The two lots of fabric were then subjected to the usual inspection and testing for fabrics of this type with these results:

(1) No tension was apparent on the fabric while running through the Tensitrol washer. The hand of fabric was the same with both the dye beck-washed and the Tensitrol-washed shirting. Working loss in

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20—45" Mason Cards, 12" Coilers, 27" Doffers.
40—45" Whitin Cards, 12" Coilers, 27" Doffers.
20—40" Potter & Johnson Cards, 27" Doffers, 12" Coilers, completely rebuilt. Don't let the name deceive you! (A Special)
Rebuilt Kitson Pickers, Single Sections or One Process. Kitson W-3

Waste Machines rebuilt one to five sections.
12—Draper Twisters, 4" Ring, 5" Gauge, 96 Spindles each, Tape Drive, individually motor driven.
20—No. 90 Universal Winders, 20 Spindles each, with Bunch Builders.
8—Saco-Lowell 8x3½, 160 Spindles each, with J-3 Long Draft.
10—Saco-Lowell 8x4, 144 Spindles each, with J-3 Long Draft.

1—6,300 spindle yarn mill completely remodeled throughout this year.

Nice location and plenty property for expansion.

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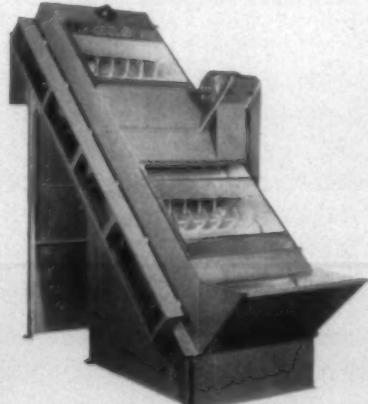
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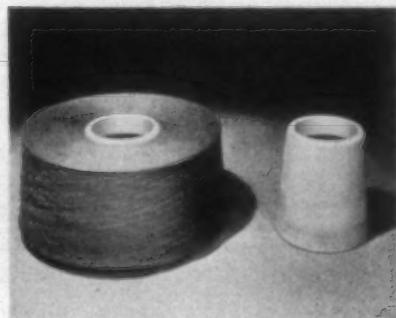
both fabrics was the same. (2) Scorch tests showed no difference in the degree of washing obtained from the standard dye beck method and the Tensitrol washer. (3) Shrinkage tests showed that the fabric washed in the Tensitrol washer was as good or better than the fabric which had been beck washed.

Since its development by Rodney Hunt Machine Co. in 1946, the versatile Tensitrol open width washers have found wide acceptance throughout the textile industry. The fact that they operate without tension to the fabric has made Tensitrol washers adaptable for a great many applications where open width washing could not previously be done, the firm claims.

Crawford & Garner Moves

Crawford & Garner, Inc., distributor of Stevens paints, has moved its office from Greer, S. C., to Spartanburg, S. C., it is announced by R. Alex Garner.

Foster Model 102



Foster Machine Co., Westfield, Mass., has developed equipment for its Model 102 winding machine which enables this machine to wind package dyed yarns at high speeds (up to 715 y.p.m.) to four-inch traverse slight taper cones to fit in a Barber-Colman creel. This new equipment is espe-

cially effective in handling of fine count yarns from 50s to 80s. The cone is four inches in diameter at the base and will hold up to three pounds of yarn. It is completely free of ribbon wind and draws off very easily in the creel, the firm states. Mills now using this Foster equipment include Hathaway Mfg. Co. of New Bedford and Bates Mfg. Co. of Lewiston, Me.

Improved Static Elimination

A new, more effective and safer way of neutralizing static electricity has been developed by Herbert Products, Inc., represented in the United States and Canada by American Textile Engineering, Inc., Arlington, N. J. The re-designed device is called the Oxy neutralizer cold bar, said to be a great improvement over the company's former Oxy neutralizer bar, which has been in use for over 30 years.

Through special means in the interior construction of the cold neutralizer bar, the manufacturer produced a unit that has the remarkable features of intense ionization from its emitter points, but at the same time offers no shock, no sting and no sparks at these points. The discharge from the emitter points is surprisingly safe and does not create even the slightest sensation of electric shock when touched by hand or otherwise.

The cold neutralizer bar, similar to the other well-known models of Herbert Products, Inc., has an outside tube of approximately one-inch diameter, with phosphor bronze spring emitter points spaced an inch apart, and projecting one-half inch from the tube. For machines where material being neutralized, might, through slackened tension, fall upon the points or just touch them, a model is available with the points protected by a lucite shield on each side of the neutralizer bar. The lucite shields are held in position by substantial bakelite clamps. The effectiveness in eliminating static electricity is equally accomplished either with the unshielded or shielded neutralizer bar.

The cold Oxy neutralizer bar is energized by high voltage alternating current from a

transformer. Safety considerations have been given utmost importance in the entire equipment, beginning at the transformer. It is so designed as to have extraordinarily high impedance in order to limit current flow in the secondary to a value not in excess of 2 M.A. This current is so far below the danger level that even an electrician or mechanic, touching the open end of a connected transformer, cannot be hurt by the shock. The operators of the machines on which the neutralizers are used, can safely touch any part of the equipment without feeling the slightest sensation. An additional safety achievement is a connector that cannot expose any electrically "live" connections of the secondary line from the transformer, even though the power cable should be disconnected while the power is on.

The manufacturer has designed a complete line of brackets to mount the bars on various machines, particularly in the textile industry where static electricity is so troublesome. The installation of static eliminators will increase production considerably and in most cases assures a better product, the firm claims. For complete information contact American Textile Engineering, Inc., Arlington, N. J.

Mildewproofing Specifications

Data on all government specifications for mildewproofing fabrics under which Sindar's protective agent, G-4 (R) (dichlorophene) may be used are summarized in the current issue of *Sindar Reporter*, published by Sindar Corp. of New York. The introductory material presented in this issue of *Sindar Reporter* (Number One, 1951,) points out that with the increased procurement activities of the armed forces, there will again be required large quantities of fabrics that have been protected against deterioration caused by mildew or rot. It is stated that "experience of government and other scientists with G-4 (dichlorophene) either alone or in conjunction with copper naphthenate showed this material to be excellent for mildewproofing." Items successfully mildew-



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proofed during World War II included the fabric, webbing and thread of duffle bags, raincoats, tents, tarpaulins and many others. The government specifications under which G-4 may be used to meet mildew requirements are listed in chart form, grouped according to military specifications, those of joint Army and Navy, U. S. Army and miscellaneous. Extra copies of this issue are available upon request to Sindar Corp., 330 West 42nd Street, New York 18, N. Y.

Edgcomb Steel Co. Expands

Frank F. Rose, general manager of the Edgcomb Steel Co. of Charlotte, N. C., announces the completion and opening of the firm's new addition of 15,000 square feet. Due to this expansion, Mr. Rose has named W. Jerry Winter as manager of Charlotte plant operations, and J. B. Johnson as credit manager. Edgcomb Steel Co. now numbers some 70 employees in Charlotte. They warehouse, for quick delivery, aluminum, brass and copper, stainless and hot and cold rolled carbon steels, so critical today to defense and essential industry in the Southeast.

Improved Crusher

Riggs & Lombard of Lowell, Mass., makers of the Fleet Line of finishing equipment, announces important improvements in the design of its semi-continuous crusher. These improvements are as follows: Top roll pressure equipment has been re-designed to give finger-tip pneumatic pressure control, resulting in greater ease of operation and more uniform pressure from roll to roll. Exhaust equipment has also been redesigned to effect more complete exhaustion of dust from the inside of the machine so that fabrics come out much cleaner.

New Cutler-Hammer Office

Opening of a sales office at 120 East Third Street, Charlotte, N. C., is announced by Cutler-Hammer, Inc., pioneer electrical manufacturers, Milwaukee, Wis. Located in one of the key textile producing areas of the country, the new office is being opened to meet the expanding demand for Cutler-Hammer electrical apparatus in the textile and other industries in that area. The office will be operated as a branch of the company's Atlanta, Ga., district sales office and will be staffed by Frank A. Miller, Jr., and C. Lee Shaw.

Expand Ponsol Dye Facilities

Plans for expansion of manufacturing facilities for Ponsol dyes at Deepwater Point, N. J., were announced recently by the organic chemicals department of E. I. du Pont de Nemours & Co. Characterized by excellent fastness properties, the Ponsol line of vat dyes is in increasing demand for the dyeing and printing of cotton, wool and synthetic fibers. Expansion of these facilities was necessitated by continued growth in civilian needs, plus a sharp increase in military requirements. This new expansion, which involves an expenditure of approximately one million dollars, will not require the erection of additional buildings as the existing plant will be adapted, modernized

and expanded. Initial production from these new facilities is scheduled for early 1952. With new productive equipment and increased capacity, the company plans to offer a number of new Ponsol products to the trade.

Foxboro Knoxville Branch

A new branch office of the Foxboro (Mass.) Co. has been opened at 618 W. Church Avenue, Knoxville, Tenn. Marvin L. Cleaton, Jr., formerly in charge of the company's office at Columbus, Ohio, has been transferred to become branch manager at Knoxville. Until now, manufacturers in the Knoxville area have been served by the Foxboro office in Atlanta. This adds one more to the Foxboro network of Southern branch offices which in the past 40 years has expanded with the ever-growing needs of the industrial South for modern instrument engineering.

New Fiber Softener

E. F. Houghton & Co., Philadelphia, Pa., manufacturer of metal processing and textile processing products, industrial lubricants and leathers, announces the marketing

of a new anionic substantive fiber softener under the name of Softex 460 produced by an exclusive process. Softex 460, in addition to its resistance to removal from textile fibers by washing, exhibits excellent softening properties for both spun rayons and cottons. An outstanding feature is its small effect on fading of dyestuffs and lack of yellowing of white fabrics. The new softener is alkaline in nature and is the result of 18 months of intensive research, including actual mill tests with cotton knitting yarns, cotton hosiery, cotton and rayon fabrics. It is very well suited for package dyeing because of its even distribution through the yarn package.

New American Aniline Branch

Construction of a new building providing spacious warehouse facilities, general offices and laboratories for the Chattanooga, Tenn., branch of American Aniline Products, Inc., has been announced by G. L. Armour, president of the company. The plant, located at 4001 Rossville Boulevard, is expected to be completed about the middle of May. It represents another large step forward in American Aniline's plans to expand its services to textile centers, especially in the

ROTARY UNIONS
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Pipe Size
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A Revolving Steam Connection

They Save Money
ROTARY UNIONS require practically no maintenance for months on end . . . no tightening, no parts . . . and cut mechanics' time way down. They save on steam and materials and cut power consumption from 30% to 80%.

They Increase Production
Ball bearing construction permits high speeds and prevents stretching of warps. Other exclusive features prevent operating failures and materially reduce downtime.

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FOR THE TEXTILE INDUSTRY'S USE—

South. The new building, of modern design, is constructed of brick, concrete and steel and will be suitably landscaped. It is being erected on a tract of land 160 by 160 feet, leaving room for future expansion to the rear. Over-all the new structure contains 12,000 square feet. It was designed by Mangum W. Sloan of Charlotte, N. C., and is being constructed by Southwestern Construction Co. of Charlotte and Atlanta, Ga.

American Aniline is one of the largest suppliers of dyestuff to the textile industries in the United States, with main plant facilities at Lock Haven, Pa. The new Chattanooga quarters and additional laboratory space, are designed to better serve the company's customers throughout the South. Joe T. Bohannon, Jr., will be the manager of the new Chattanooga branch. Mr. Bohannon has been with American Aniline for more than 13 years. The sales staff will also include Rufus W. Freeze of Chattanooga and Charles O. Staines of Rome, Ga. The application laboratory facilities will be under the direction of Samuel C. Hennessee of Chattanooga, who, in his 15 years of experience, has held important supervisory positions in prominent Southern dye houses and finishing plants.

New Wear Tester

United States Testing Co., Inc., announces the installation of additional wear testing equipment to its textile and general testing laboratories. The new apparatus is known as the Stoll Quartermaster Universal Wear Tester and is used for all types of abrasion testing. It is now possible to more accurately indicate the abrasion resistance of resin treated fabric. The company can evaluate the abrasion resistance of resin treated and non-resin treated fabrics under such actual wearing conditions as bending, rolling, folding and in the regular flat test. This abrasion test machine was developed after exhaustive research and it shows an extremely high correlation with actual wear tests. It is the company's most accurate testing apparatus to date in determining the correct application of resin treated fabrics. Many manufacturers are using these facilities to determine whether or not their products meet required governmental specifications and in developing their own production processes and techniques.

Process Heating Co. Agent

Redman Engineering Service of High Point, N. C., has been appointed direct sales agents for the entire textile South for Process Heating Co., 46 Herkimer Place, Brooklyn, N. Y. Process Heating Co. manufactures gas and electric infra-red units, drying ovens and hot-air drying equipment, radiant type gas burners for singers, dryers on tenters, slasher and steam cans.

General Dyestuff Circulars

General Dyestuff Corp., 435 Hudson Street, New York City, announces the release of the following circulars: G-665-Igepal CO Extra High Conc.; G-668-Fastusol

Blue L5R; G-671-Solidogen WF Powder; G-674-Blancophor R; G-675-Diazo Brown RA-CF; G-676-Alizarine Fast Grey BLN-CF; and G-677-Monochrome Brown EBC Conc. CF.

New Sargent Bulletin

A new bulletin describing its various items has been made available to the industry by C. G. Sargent's Sons Corp. Copies of Bulletin No. 186, describing the firm's line of dusters, may be obtained on request to C. G. Sargent's Sons Corp., Graniteville, Mass.

A. B. Carter Addition

A \$20,000 brick and steel addition to the heat-treating department of A. B. Carter, Inc., Gastonia, N. C., manufacturer of spinning ring travelers, is nearing completion. The addition is being built as a second floor over the present heat-treating department. It will provide more space for new equipment.

New Electric Brake

An important technical advance that may lead to much lower costs of producing textiles was reported April 16 by Warner Electric Brake & Clutch Co. of South Beloit, Ill. The company announced development of a new series of electric brakes and clutches that are especially adaptable for use on the high-speed warper. "Use of the new equipment will mean a substantial increase in the output of the warping machine, and a corresponding increase in the productive capacity of an individual textile plant," according to Norman K. Anderson, manager of the company's industrial clutch and brake division.

Mr. Anderson disclosed that public announcement of the use of these brakes and clutches has been withheld for more than a year while extensive tests and experiments with the new equipment was performed on warping machinery. Several manufacturers of textile machines have begun using the new brakes and clutches. The new equipment is suitable for installation on existing warping machines, of which there are approximately 50,000 in American textile plants.

The adoption of the new electric brakes has made these improvements possible in the warping machine operation: (1) The machine can now be stopped almost three times as fast as formerly, avoiding loss, tangling and snarling of thread ends, thus making it possible for the operator to repair thread breakage faster than before. (2) Skidding of the threads with its resultant damage is virtually eliminated and a better grade end product of cloth is assured. (3) The simplified brake system requires no adjustment for wear, with the result that maintenance expenses are reduced.

Mr. Anderson pointed out that formerly warping machines stopped and started by multi-control, mechanical, hydraulic or other systems whose operation was difficult to synchronize. In contrast, the electrically-operated system is a self-synchronizing unit and requires only simple dial settings. It

was explained that the warping machine was adaptable for use on nearly every type of cloth, including cotton, wool, rayon, silk and nylon. It was also revealed that the company is continuing development of a companion series of electric brakes and clutches for use on looms, which would supplement the progress already made in improving the warping operation.

Who's Who Among Textile Merchants

Saul F. Dribben



Saul F. Dribben, who is considered the dean of the Worth Street area in New York City, was born at 950 Fifth Avenue on April 20, 1880, and has spent his entire life in that city.

When 14 years old he went to work at \$3 per week as an office boy for the Cone Export & Commission Co., of which he is now president, and his place of business has never been more than 200 yards from where he began his career. From office boy he advanced to the credit department and then to manager of sales in New York, Pennsylvania and Maryland. In 1905 he became a department manager and in 1907 manager of Cone Export's New York offices. In 1910 he became treasurer, vice-president in 1914, and president in 1938.

While a young man he became an ardent admirer of the late Caesar Cone, and says that Mr. Cone has been his guiding light. Although Saul Dribben was denied even a high school education, he took night business courses, has read and studied the best in literature, and is exceptionally well-informed.

In war years he took the lead in organizing the cotton textile merchants of Worth Street for assistance in supplying government fabric requirements and was a member of the group, which included Bertram H. Borden, Gerrish Milliken, John P. Stevens, Ridley Watts and others, that grew into the Association of Cotton Textile Merchants of New York.

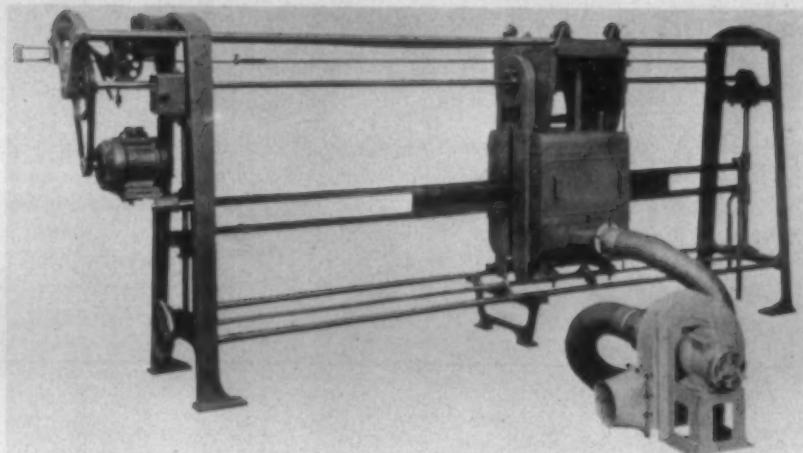
Saul F. Dribben is a quiet, self-effacing man, but he is easily the top man among textile merchants and enjoys the friendship and respect of other men who handle the sale of textile goods.

He has one son who is a banker and one who is a doctor.

New Brushing Machine

A new precision-built reed and heddle brushing machine that cleans and polishes reeds and is built by Sam. Vollenweider A-G of Horgen, Switzerland has been made available in the United States. Called the Robot, the machine also cleans and polishes heddles which are mounted in the harness frame, eliminating the necessity of removing the heddles for cleaning. Each Robot machine is supplied with one pair of horsehair brushes, one pair of bronze brushes and a special honing attachment. The horsehair brushes are used for cleaning average dirty reeds and heddles while the bronze brushes are used for cleaning rusty reeds and heddles. These bronze brushes remove rust quickly without damaging heddles or reeds.

The honing attachment is used for polishing slightly damaged reed dents and for removing shuttle marks. The two brushes move up and down and then travel lengthwise the whole reed or harness frame. They clean the reeds and heddles very effectively and due to the fast revolving action, remove the dirt between the dents, at the same time polishing the rough spots. Reeds or harness frames with heddles can be



mounted into the cleaning machines within a few seconds and after pushing the starting button, the machine cleans the reeds or the heddles fully automatically and stops after the predetermined number of traverses.

The machine is fully adjustable. The brushes can be set to either move up and down parallel or so that one brush will move up while the other brush pulls down.

The vertical motion is adjustable also, from zero to approximately 16 inches. A dial at the end of the machine can be set to predetermine the number of horizontal traverses.

The Robot reed and heddle brushing machine is distributed in the United States by H. J. Theiler Corp. of Whitinsville, Mass., to which firm inquiries should be directed.

Serving The Textile Industry

The Medley Story On Drawing

MEDLEY, with foundry and machine shops at Columbus, Georgia, is one of the largest producers of drawing frames and drawing frame equipment in the business. It introduced to the industry such precision parts as grease-sealed ball bearing top rolls, helical gears and other advancements which have contributed to better drawing and lower operating costs.

In 1950, following the death of Wilson Williams, a new company, "Medley Manufacturing Company (Limited)," was formed

with headquarters at Columbus. It is headed by L. H. Morrison, (left), a former manufacturer's agent, representing Medley products. All key personnel of the old company, including engineers and technicians, were retained, and

others have been added.

Its sales manager, Burrel C. Cole (also a partner) has more than 30 years' experience in automotive sales, service and engineering. Although he claims to be the only man connected with Medley who knows nothing about drawing, we find him thoroughly conversant on every phase of the

subject. Under Mr. Morrison's leadership the company has discontinued supplying parts to other drawing frame manufacturers and to local repair shops, in order that a more efficient service may be rendered directly to the mills.

Two sales divisions have been created, one out of Columbus and one for the Carolinas and Virginia. Sales representatives, with card room experience, call on all mills using drawing, at intervals, but they do not carry order books, only samples and catalogs descriptive of Medley equipment and services. If it is indicated that drawing frame improvements are necessary or desired, at the mill's request, they are followed by a technician, who makes a study of mill conditions and the materials being processed or to be processed. Detail recommendations, specifications and firm quotations are then made. Trial installations will be made, if desired, all without obligation to the mill.

It is Medley's contention that only by this method can the firm guarantee results and complete satisfaction, and the cost over a period of time is in most cases less than making essential repairs or replacements when imperative.

Mr. Cole states: "Most all mill superintendents that I have contacted, will agree that the quality of their product is made or

irrevocably lost at the drawing frame. But, when we say that, it conveys a selfish motive. It nevertheless remains a fact."

While Medley manufactures complete frames for new mills and mill extensions, its principle volume comes from mills already in operation. A partial change-over to Medley equipment consists primarily of replacing rolls, gears, slide bearings and other parts above the beam, using the mills' present frames. If the coiler mechanisms and can tables are in good operating condition, this will produce the equivalent of new drawing, and at economical cost. A complete change-over consists of stripping the frame down to the beams, sams and line shafts and installing all new component parts, including coiler mechanisms and can tables. This likewise represents considerable saving over completely new equipment. Medley manufactures all combinations of rolls and roll spreads, and coiler equipment for 12 or 14-inch cans.

An innovation in its services is a complete catalog clearly illustrating its products and services, including a price appendix. This obviates the necessity of writing for quotations. The company manufactures and carries in stock more than 800 replacement parts for its own and other makes of frames. According to Mr. Cole, Medley will shortly expand its services to other departments of the mill, particularly with reference to rolls, gears and bearings. The firm is tooling up now, and the equipment includes induction heat treating for greater precision and reduced costs.

Southern Textile Association Meetings

One program remains on the Southern Textile Association's regular schedule of Spring divisional meetings, that of the Piedmont Division May 7. Marshall Rhyne, general superintendent of Chronicle Mills, Imperial Yarn Mills and Stowe Spinning Co. at Belmont, N. C., announces that the Monday evening meeting will begin at 7:30 at the North Carolina Vocational Textile School in Belmont. The principal address will be made by Thomas Carroll of Charlotte, N. C., field representative of the National Cotton Council, whose subject will be "Junior Discovers America." A technical address, "Synthetic Fibers," will be delivered by F. M. Johnson, research director for the Rhodhiss (N. C.) Division of Pacific Mills. Mr. Johnson's remarks will deal principally with the Pacific-Warner & Swasey converter.

Two other divisional meetings were held this month, details of which will be reported in subsequent issues of *TEXTILE BULLETIN*. At Greensboro, N. C., April 14 the Northern North Carolina-Virginia Division met under the chairmanship of Glenn R. Ward, superintendent of Highland Cotton Mills at High Point, N. C., to hear an address entitled "The Challenge of 1951" by W. H. Neal, senior vice-president of Wachovia Bank & Trust Co., Winston-Salem, N. C. Following Mr. Neal's remarks those present divided into technical discussion groups.

At Greenville April 21 the South Carolina Division elected James A. Chapman, Jr., superintendent of Riverdale Mills at Enoree, as its 1951-52 chairman to succeed J. C. Godfrey, superintendent of Calhoun Mills at Calhoun Falls, Joseph F. Chalmers, general superintendent for Greenwood Mills at Greenwood, was named chairman of the division's carding and spinning unit to succeed Joseph Carter of Spartan Mills at Startex. The program featured a presentation of the research paper, "Neps, the Plague of the Cotton Industry," by Prof. Ivan Feng of the North Carolina State College School of Textiles, and a forum on slashing and weaving led by Joe L. Delany, general superintendent of Joanna Cotton Mills Co., Joanna. Mr. Godfrey, the retiring chairman, received commendations for the quality of programs arranged by him during the past year.

As may be noted in the advertisement on Page 38 of this issue, the annual convention of the Southern Textile Association will be held June 21-22-23 at Mayview Manor, Blowing Rock, N. C. By early this month all rooms at Mayview had been reserved for the convention week-end, but this does not in any sense preclude attendance by mill executives who have been unable until now to plan to be at Blowing Rock. As indicated in the advertisement on Page 38, rooms are available at Green Park Hotel. In addition to Green Park facilities, rooms (with or without meals—American or European plans, respectively) are available at other hotels and inns. These include Hotel Skyland (35 rooms, American plan), Martin House (28 rooms, American), Watauga Inn (25 rooms, American), Sunshine Inn (15 rooms, American), Skyway Lodge (ten rooms, American) and Parkway Hotel (ten rooms, European). Rates at Martin House are \$6 and up per day single, \$12 and up per day double; at Watauga Inn, rates are \$7 and up per day single, \$12 and up per day double. Information about charges at the other establishments may be secured direct from their management. For information about smaller lodges and tourist courts, write to the Blowing Rock Chamber of Commerce.

Speakers scheduled to address the convention include William H. Ruffin, president and treasurer of Erwin Mills,

Inc., and currently president of the National Association of Manufacturers; David Clark, editor of *TEXTILE BULLETIN*, who will report on his current inspection tour of European textile manufacturing facilities; and Guy B. Arthur, Jr., president of Management Evaluation Services, Inc., Toccoa, Ga., who will discuss "How Supervisors Can Use Their Employees' Opinions." Arrival at Blowing Rock should be scheduled for Thursday afternoon, June 21, since activity begins that evening with a buffet supper. The first business session will take place Friday morning; that afternoon there will be the annual golf tournament and bingo game, followed by the Associate Members Division reception and banquet that night. The convention will end Saturday morning, June 23, with a final business session and election of new officers for 1951-52.

March Rayon Shipments Up 12 Per Cent

Shipments of rayon yarn and staple in March rose to 112,200,000 pounds, an increase of 12 per cent over the 100,000,000 pounds delivered in February, according to *Rayon Organon*, statistical bulletin of the Textile Economics Bureau, Inc. March, 1951, shipments were the third highest on record, being exceeded only by the 116,300,000 pounds shipped in December, 1950, and the 112,700,000 pounds in August, 1950. Of the March shipments, 29,400,000 pounds were viscose-cupra textile yarn, 27,600,000 pounds viscose high tenacity yarn, 28,300,000 pounds acetate filament yarn, 10,200,000 pounds acetate staple, and 16,700,000 pounds viscose staple. The total of viscose staple and textile yarn amounted to 46,100,000 pounds and acetate 38,500,000 pounds.

At the end of March, filament yarn stocks in the hands of producers remained at the nominal level of 9,200,000 pounds, which compared with 10,500,000 pounds at the end of February. Rayon staple stocks at the end of March amounted to 4,000,000 pounds, compared with 3,800,000 pounds at the end of the preceding month.

Imports of rayon staple in February amounted to 7,707,000 pounds, a decline of 28 per cent compared to January. Shipments were lower from France, Germany and Norway, but larger imports were received from Sweden and the United Kingdom and for the first time Greece exported staple to the United States. Imports of rayon filament yarn also declined in February compared to the previous month. Lower imports were reported from all countries except Italy, Spain, Switzerland and the United Kingdom.

The *Organon* has made it a point to re-examine data relative to the extent of bona fide military needs of the different types of textiles during 1951 and 1952 and several background facts are developed. For example, the average annual military use of wool during the four war years 1942-1945 was 265,000,000 pounds, and the peak year was 320,000,000 pounds in 1943. The average military usage over the four years was 36 per cent of total apparel wool consumption. Cotton consumption in the four years of World War II averaged 1,690,000,000 pounds a year or 33 per cent of the total consumption with peak usage of 1,940,000,000 pounds in 1944, or 40 per cent of total consumption. Rayon's military consumption averaged 130,000,000 pounds annually or 19 per cent of total consumption. The top figure in rayon usage during the war period was 184,000,000 pounds or 24 per cent of total consumption in 1945.

The *Organon* calls attention to the differences between the

first two war years of 1941 and 1942 as against 1951 and 1952 in the military textile picture. First, the great haste in preparing for a full-scale shooting war does not exist now, and the inevitable waste and over-ordering of textiles by the Armed Forces both in general and by type of product should be less today than it was in 1941-1942. Second, the military personnel in World War II built up to a total of around 12,000,000 men as against one-quarter or at most one-third of that figure at present. Moreover, the wearing out and loss of textile items per man in combat today is less than it was during World War II. Third, the Congress last year authorized the military to purchase and stockpile 100,000,000 pounds of wool of which approximately 30,000,000 pounds were to be in the form of raw wool and 70,000,000 pounds in wool textile products. There was no time for such a program in 1942, of course.

Summarizing these factors, the *Organon* points out that the bona fide average military demand for the various textile fibers in the form of fabricated goods annually for 1951 and 1952 might be from one-quarter to as much as one-third of early World War II years' demand plus the wool cloth stockpile. For wool this would be 75,000,000 to 100,000,000 pounds plus half of the 70,000,000-pound wool cloth reserve for each year or a total of 110,000,000 to 135,000,000 pounds per year. On the basis of recent rates of total apparel-type wool consumption amounting to 575,000,000 pounds a year, this would be 13 to 17 per cent of the total consumption for regular use plus six per cent for the reserve (the latter for two years only) or a total of from 19 to 23 per cent for two years.

If carpet class wool totals were added, the current military consumption would be figured against a total of about 800,000,000 pounds (575,000,000 pounds apparel, 200,000,000 pounds raw carpet class, and 25,000,000 pounds re-worked and re-processed carpet class). On this basis, the total military consumption would be from ten to 13 per cent for regular use plus four per cent for reserve.

For the next two years, it is estimated that 450,000,000 to 600,000,000 pounds of cotton will be consumed by the military on the basis of one-quarter to one-third of the 1942-1943 annual military consumption. In terms of a current 5,000,000,000-pound annual consumption (10,000,000 bales), the military would be taking nine to 12 per cent of the total.

As for rayon, producers have been ordered to set aside 15 per cent of their high tenacity viscose yarn for defense purposes, a figure representing as much as 50,000,000 pounds a year. For all other types of rayon, a percentage of the World War II military consumption plus some new uses would utilize not more than 20,000,000 pounds annually or two per cent of the industry's textile filament yarn plus staple producing capacity. The nylon figures run higher in percentage but no figures are available.

A study by the *Organon* of United States exports of rayon and other man-made staple, filament yarn, fabric and manufactured goods during the calendar year 1950 shows a decline for the third consecutive year from the record high level established in 1947. The value of these 1950 exports amounted to \$176,804,000, a decline of 13½ per cent from 1949, 23½ per cent from 1948, and 42½ per cent from the record \$307,717,000 in 1947. The 1950 exports, however, were nearly twelve times as large as the \$15,288,000 exports in 1939.

The *Organon* estimates that a total of 102,000,000 pounds of goods were exported in 1950, a figure identical to

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the estimated poundage of 1948 but 26 per cent below the previous record year of 1949. The 1950 poundage was about eight times as large as the exports of 13,000,000 pounds in 1939. The divergent movements in poundage and dollars is explained by the per-unit changes in the stated value of the exports as well as varying reductions in different items.

In the rayon raw materials group (yarn, fiber and tire fabric), the 1950 exports amounted to 46,800,000 pounds compared to 56,800,000 pounds in 1949. All categories lost ground except acetate rayon filament yarn which showed no change. Nylon and other man-made fibers not figured in the rayon poundage or dollar value computation, increased to record high levels in 1950.

Semi-manufactured rayon goods exports (excluding cord tire and fuel cell fabrics) declined in 1950 to 41,000,000 pounds, a drop of 36 per cent from 1949 but six per cent over 1948. Poundage of manufactured rayon goods exported in 1950 was off 17 per cent from 1949 and 20 per cent below the 1948 record of 17,400,000 pounds. But manufactured goods exports were a small part of the total both in pounds and in dollars.

Colombia, Uruguay and Venezuela stand out as important consumers of American rayon raw materials in South America. In North America, the important countries were Canada and Mexico. Italy and the Union of South Africa stand out in the rayon waste and tops category. Nylon yarn distribution, on the other hand, centers more toward European countries, but both North and South American outlets are of real importance. Exports of rayon cord tire fabrics show a different distribution with North and South American countries outstanding but many more countries taking the product. Exports of tire cord to Sweden, Australia, Union of South Africa and Indonesia should be noted. Notable increases were made in exports of filament and spun rayon woven fabrics to North American and European countries in 1950, while exports to South America declined. Pronounced declines were noted in shipments to the Australiasian and African areas, Hong Kong, the Philippines and the Union of South Africa.

Two States Added To S.R.R.L. Area

Tennessee and North Carolina have been added to the nine-state agricultural area served by United States Department of Agriculture's Southern Regional Research Laboratory at New Orleans, La., since its creation in 1938. They were formerly in the area served by the Eastern Laboratory in Philadelphia. Dr. G. E. Hilbert, chief, Bureau of Agricultural and Industrial Chemistry, announced the transfer in New Orleans at the 1951 conference of state experiment station and Southern Laboratory research workers, held to strengthen co-operative relations on agricultural investigations from breeding through the end-use of crops. The conference was held March 19-21. About 50 persons, including a number from the Agricultural Research Administration in Washington, attended.

The change in regions is being made because agricultural interests in North Carolina and Tennessee are so closely related to those of the cotton belt states already being served by the New Orleans Laboratory, Dr. Hilbert explained. The area includes South Carolina, Georgia, Florida, Alabama, Louisiana, Arkansas, Texas, Oklahoma and New Mexico.

Although cotton was the principal subject discussed by



Speakers at the session of the collaborators conference, devoted to the relationships between cotton fiber and yarn properties: Seated, Dr. E. H. Pressley, Agricultural Experiment Station, Tucson, Ariz.; and Elliot B. Grover, North Carolina State College, Raleigh, N. C. Standing: J. M. Green, Agricultural Experiment Station, Stillwater, Okla. (chairman of the session); L. A. Fiori and J. J. Brown, Cotton Mechanical Processing Division, Southern Regional Research Laboratory.

the research workers, Dr. C. H. Fisher, director of the laboratory, touched on other commodities in his summary of crop utilization research in the South for the past year. He named three developments of the laboratory—a cotton opening machine for use in textile mills, maleo-pimamic acid from pine gum, and a new anti-oxidant termed conidendrol—which are in commercial use, or soon will be. Several other developments are now being evaluated by industry for possible commercial applications, he said. These include acetylated cotton for laundry press pad covers, soluble cotton yarn, a chemical treatment that makes cotton harder to soil and easier to clean, and tightly-woven fabrics which resist the penetration of air and water. Ralph A. Rusca of the laboratory's cotton mechanical processing division, described the new cotton opener and the tightly-woven fabrics in detail.

Other speakers revealed new information obtained recently on fiber properties as they are related to cotton breeding, ginning, processing and utilization, pointing out the need for greater recognition of factors other than grade and staple length in buying and using cotton. L. A. Fiori summarized an unusual study the laboratory has made of the relationship between cotton's fineness and the physical properties of spun yarns. The study was conducted in such a way that fineness was the only variable property. John J. Brown reported a similar study of fiber strength.

J. F. O'Kelly of the Agricultural Experiment Station, State College, Miss., reviewed the efforts of plant breeders to develop higher-yielding strains of the cottons that have unusually desirable properties, including high strength and long staple. This is still a challenging problem, he said. Fiber properties such as fineness and maturity exert great

influence on the nepping characteristics of cotton, but improvements can be obtained by proper handling of the cotton during cleaning and carding, said Elliot B. Grover of the School of Textiles, North Carolina State College, which has made a special study of the problem recently under a Research and Marketing Act contract. Professor Grover displayed a new device his group developed to facilitate the counting of neps.

E. H. Pressley of the Agricultural Experiment Station in Tucson, Ariz., inventor of the Pressley fiber testing machine, pointed out the need for equipment to determine the nepping tendencies of different cottons. The measurement of fiber properties by modern techniques can greatly speed the work of the cotton breeder, he said.

A special feature on the conference program was a talk by Dr. Leonard Smith, director of Utilization Research, National Cotton Council, Washington, D. C., who described the program of his organization on improving the utilization of cotton lint. Dr. Smith recently was appointed a collaborator to advise the Bureau of Agricultural and Industrial Chemistry on the cotton research program of the Southern Regional Research Laboratory. R. J. Cheatham, head of the cotton mechanical processing division, and A. M. Dupre', Jr., special assistant to the director, described the laboratory's organization and facilities for cotton research.

Textile School Deans Elect George Walker

George Walker, president of New Bedford (Mass.) Textile Institute, was elected president of the National Council of Textile School Deans early this month at the Spring meeting of the council in West Point, Ga. Mr. Walker succeeds Richard S. Cox, dean of the Philadelphia (Pa.) Textile Institute. Herman A. Dickert, dean of the A. French Textile School at the Georgia Institute of Technology, Atlanta, was elected vice-president of the council to succeed Mr. Walker. M. Earl Heard, vice-president in charge of research at West Point Mfg. Co., was the official host with the deans as guests of West Point Mfg. Co.

Among those present at the Spring meeting of the council were Dr. Hugh M. Brown, dean of the School of Textiles at Clemson (S. C.) College; Malcolm E. Campbell, dean of the School of Textiles at N. C. State College; Leslie B. Coombs, president of Bradford Durfee Technical Institute, Fall River, Mass.; W. D. Fales, head of the textile school at the Rhode Island School of Design, Providence, R. I.; Dr. F. M. Feiker, dean of the School of Engineering at George Washington University, Washington, D. C.; E. W. Camp and Charles W. Knight of Alabama Polytechnic Institute, Auburn, Ala.; Bertrand W. Hayward, director of Philadelphia Textile Institute; C. A. Jones of the A. French Textile School, Georgia Tech; L. E. Parsons, head of the textile engineering department at Texas Technological College, Lubbock, Tex.; Edward T. Pickard, secretary of the Textile Foundation, Kent, Conn.; Dr. G. Nathan Reed, dean of Lowell (Mass.) Textile Institute; Mr. Walker, Mr. Cox and Mr. Dickert.

Sidney Gilbert & Co., Inc., textile converters and dealers in yarns, has moved its Southern offices from Chattanooga, Tenn., to Charlotte, N. C. The firm's Southern offices are now located at 709 Builder's Building, Charlotte. D. D. Berson, company treasurer, has also taken up permanent residence in Charlotte.

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M.I.T. Offers Summer Textile Course

Designed to review recent developments in methods and equipment, a special course in the "Principles of Textile Research" will be included in Summer Session 1951 activities at the Massachusetts Institute of Technology, from July 2 to 27. The four-week course will be given under the direction of Prof. Edward R. Schwarz, who is in charge of the textile division in the M.I.T. department of mechanical engineering. Its emphasis will be on the functioning of a textile research laboratory in connection with quality control programs, new product development, instrumentation, processing, and the field of education at college and university level.

The Summer program will combine lectures, demonstrations and seminar sessions covering such subjects as planning of experiments, recording and presentation of data, analysis of variance, significance testing, polarized light and its applications, tensile testing, heat transmission, abrasion, sound velocity techniques, application of servomechanisms, photomicrography, sampling techniques, precision of measurement, correlation analysis, improved sectioning, air permeability, resilience, flexibility, creep and relaxation, impact, applications of electronics and stereographs.

Thus the course, Prof. Schwarz points out, will provide a survey of the precise and sensitive equipment now available and will review the more powerful and efficient means for analyzing and interpreting research findings. Much of the equipment to be discussed has been developed in the M.I.T. textile division laboratories, he adds.

According to Prof. Walter H. Gale, director of the M.I.T. Summer session, the course should be of particular interest and value to teachers of home economics, staff members in textile schools, textile research laboratory directors and personnel, and students with a background in textiles, science or engineering who seek an orientation course in modern textile research. Tuition will be \$125.

The textile research course is one of a series of special Summer activities planned during 1951, designed to make M.I.T.'s educational and research facilities available to those who cannot participate in the regular academic program. Participants may reserve rooms in M.I.T.'s new dormitory, the Everett Moore Baker House, overlooking the Charles River Basin and Boston. All facilities and privileges of the institute will be open to them, according to Prof. Gale. Further information on this and other special Summer activities may be obtained from Prof. Gale at Room 3-107, Massachusetts Institute of Technology, Cambridge 39.

Certification Mark For Rayon Fabrics

A plan for the use of the American standard certification mark of the American Standards Association on rayon fabrics has recently been sent to letter ballot of A.S.A.'s Sectional Committee on Rayon Fabrics, L22. It will serve as a recommendation to producing, distributing, servicing, and consumer organizations. Developed by a special subcommittee, the plan is now before the same committee that developed the proposed American standards for rayon fabrics.

The certification mark, a distinctive pattern incorporating the letters "AS," is intended as a guarantee that the materials or commodities on which it is stamped or applied on a label, meet an applicable "American Standard." In this

case it would be the proposed American standards for rayon fabrics. The plan for rayon fabrics certification contains a program for testing, sampling, examination and re-examination of fabrics to determine conformity with the standard.

The success of such a certification plan hinges on the integrity, impartiality and thoroughness of a certifying agency. In order to accomplish this, the plan calls for the organization of a voluntary, independent certifying agency composed of representatives of the following interests whether they be associations or individual concerns: rayon yarn producers; gray goods manufacturers; converters; chemical producers; dyers, printers and finishers; garment manufacturers; wholesalers; distributors (retailers, mail order houses, etc.); testing laboratories; launderers and dry cleaners, and consumers. The agency will license organizations which desire to enter into contract for the use of the "AS" certification mark. It can be used together with any other insignia, trade mark or other method of identification of product.

This plan provides for the use of labels distinctive in color. For a washable class the color will be green; for careful washing it will be yellow, and for a dry-cleanable class it will be red. The plan also states that such labels should be permanently attached to garments and articles so as to provide consumer, cleaner, dyer and launderer with information indicating the class to which they belong.

Manufacturers and distributors may state that their products meet an American Standard without certification as outlined in the plan. Such references may be made on their own responsibility. Only such products as have been certified in accordance with this outline can qualify for identification by labels, in advertising and promotion material as certified and be entitled to have the American Standard certification mark "AS." The use of the mark however does not relieve the manufacturer or distributor from any responsibility in regard to misrepresentation or fraudulent statements concerning the goods so marked.

New Calco Technical Bulletin Issued

The paper, "A Review of Textile Coloring and Finishing," by the 1950 Olney Medallist, Dr. George L. Royer, assistant director, application research department, American Cyanamid Co., Calco Chemical Division, has been reprinted for distribution as Calco Technical Bulletin No. 818. Dr. Royer was honored by the A.A.T.C.C. with the 1950 Olney Medal which is awarded annually to afford public recognition of outstanding achievements and contributions in the field of textile chemistry. The award is a testimonial to Dr. Louis A. Olney, president emeritus of the association, in recognition of his lifetime of devotion and many contributions in this field.

In his paper, Dr. Royer reviews the important scientific contributions to textile dyeing and the trend toward specialization. He points out that much of the work of the scientist heretofore has been "to obtain understanding of the knowledge which the dyers and finishers have from practical experience." He predicts that the scientist should now be able to help the dyer with the solution of some of his problems. "Synthetic fibers and advances in chemicals, dyes and resins in the last 20 years have contributed to more satisfactory textiles," Dr. Royer stated, "but they also have complicated the problems of the textile chemist." Copies of Calco Technical Bulletin No. 818, "A Review of

Textile Coloring and Finishing," may be obtained by writing Advertising Department, American Cyanamid Co., Calco Chemical Division, Bound Brook, N. J.

Parsons and Stearns 'Textile Fibers'

Textile Fibers—Published by International Textbook Co., Scranton, Pa.; 271 pages; \$4.

This new reference book and handbook by L. E. Parsons and J. K. Stearns is intended as a practical guide for those interested in the fundamentals of fiber characteristics and origins. While the book does not enter deeply into any particular phase of the different fibers, it does provide a ready reference concerning the general pertinent facts of most of the important fibers in commercial use today.

Both of the authors have the necessary background required for the composing of this type of textile reference book. L. E. Parsons received a B.S. degree in Textile Engineering from the Texas Technological College in 1936. After receiving practical experience in the textile mills of Texas, he spent five years with the Du Pont Rayon Co., and then was associated with the Texas Cotton Research Commission. Since 1942, Mr. Parsons has been professor and head of the Department of Textile Engineering at Texas Technological College.

J. K. Stearns received his original formal textile education and practical mill training in the textile industry of his native Germany. This was followed by studies in England where he specialized in worsted manufacturing at the Bradford Technical College. Mr. Stearns returned to Germany and conducted research and development work on wool and rayon staple blends. He then came to the United States, and in 1937, he became designer for the Prudential Worsted Co., in Philadelphia. After four years of active service in the United States Army, Mr. Stearns devoted his attention to the training of veterans at the Botany Mills, in Passaic, N. J. Since 1947, he has been director of the School of Textiles, International Correspondence Schools at Scranton, Pa. and has devoted much of his time toward revising and maintaining these courses to encompass all of the latest developments that have taken place in the textile industry.

Textile Fibers is divided into four sections with the first three being discussions of the physical properties, methods of harvesting and marketing, and the general uses of specific types of fibers. The fourth section of the book is a resume of the principal systems used for converting the various fibers into yarn. In addition, the throwing of silk and the production of fancy yarns are included in this section. A series of questions are included at the end of each section for use when the book is used for formal instruction work or for reviewing by the general reader.

The first section of *Textile Fibers* is concerned with cotton. The historical background of the fiber is traced from the earliest evidences of spun yarn, dating as far back as 3000 B.C. to the invention of the cotton gin by Eli Whitney in 1794. The different species of the plant are listed and various varieties of commercial staples are completely described. Cotton cultivation and the physical properties which determine proper grade and staple classification are outlined. Ginning methods and types of bales are discussed and are followed by a detailed account of the various methods and factors to be evaluated in the classification of cotton for commercial sale. The section of the book closes

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with an explanation of cotton marketing methods followed in the United States.

Wool fibers are the subject of the second section of this reference book. This commences with a brief resume of the history of the use of wool as a spun fiber, starting with the discovery of wool fabrics woven by the Babylonians in 4000 B. C. The principal sources of wool, the sorting of wool, and the marketing of wool are briefly discussed, as the major portion of this section of the book is devoted to an analysis of the properties of various different grades and types of wool. Also included are descriptions of other animalistic fibers used commercially.

The third portion of the handbook is devoted to the newest group of fibers, the man-made synthetic fibers. The general fiber characteristics of synthetic fibers are first listed and evaluated, explaining denier sizes, filament and staple forms and the spinning properties of the more common types of synthetics. The major portion of this section of *Textile Fibers* is devoted to a fairly comprehensive description of the methods of producing and using viscose, cuprammonium rayon and ester, and includes a discussion of the physical properties of each fiber in turn. Nitrocellulose rayon, nylon, Orlon, Vinyon, Plexon and glass fibers are also covered in this section.

The fourth and last section of the book is concerned with the various methods of spinning the different types of fibers into yarn. The conventional cotton spinning system is briefly given with emphasis upon the various forms in which yarn may be packaged. This is followed by a resume of the various base, or stem fibers, that are commonly used, such as flax, hemp, jute, ramie and cocoanut. Wool and hair fibers are classified and the woolen, French, Bradford and American systems of worsted spinning are briefly set forth. Silk throwing and the basic principles underlying the composition of synthetic fibers are also given. Special yarns, or yarns treated after spinning, are listed and include sale yarn, dyed yarn, bleached and scoured yarn, mercerized and gassed yarns. The many different types of fancy twisted yarns and novelty yarns are described and their method of manufacture explained.

While the book attempts to cover too comprehensive a field to permit detailed discussions of each fiber included, it is valuable as a ready means of reference where only general points of information are desired. Those textile engineers who have felt the need of a reference book covering all fibers will find *Textile Fibers* a worthwhile contribution to the printed literature of the industry.

Boinet Named Delegate To Lille Exhibit

The American committee of sponsors for the International Textile Exhibition at Lille, France, has named George D. Boinet as its delegate to the exposition which opens April 28. Mr. Boinet, who also will represent the American Council of Style and Design, sailed in mid-April in time to look over the American displays at the exposition before its opening.

The American sponsors last Fall decided to go ahead with their plans for participation in the Lille exposition, despite the somber outlook of the international situation and, as a result, the United States will be well represented. In addition to 15 large machinery manufacturers, who will display their equipment in actual production, there will also be participation by such firms as Stehli & Co., Inc., J. P. Stevens & Co., Inc., Celanese Corp. of America, Onondaga

Silk Co., National Mallison Fabrics Corp., Greenwood Mills, and other displays by the manufacturers of dresses and other finished goods. Quite a few firms will display their products under the name of the European branch or representative, as in the case of E. I. du Pont de Nemours & Co. The E.C.A. has erected a large building of its own at the exposition to house its own displays and also an exhibit of the National Cotton Growers and of American textiles to depict technological development.

Mr. Boinet, who has had long experience in international trade and traffic, has intimated that he will gladly assist any other American firms, which may still decide to participate at the exposition, at this late date. Among other commercial commissions which he has accepted to carry out during his trip is the study of some aspects of the protection of models as practiced abroad. It is his hope that the results of the study will benefit American importers and distributors.

Continued efforts of the Draper Corp. to produce more labor-saving machinery to help meet the needs of its customers will be further exemplified at the Lille exhibition, April 28-May 20. Draper will exhibit two new high-speed Model X-2 looms, a 56-inch (142.2 Cm.) XD model loom and a variety of shuttles, shuttle eyes, bobbins, spinning and twister rings, temples and temple parts. Draper representatives to be in attendance at the Draper exhibit are Erwin N. Darrin, vice-president in charge of sales; L. M. Newell, manager of export sales; J. B. Jackson, chief engineer; R. P. Newell, European sales representative; and R. P. Dumais, technician.

A. Griffin Ashcroft, director of research and development at Alexander Smith & Sons Carpet Co. in Yonkers, N. Y., and currently chairman of the research advisory committee of the Textile Research Institute, will fly to Europe soon in order to speak at the Textile Institute Annual Conference, 1951, to be held in the latter part of May at Brighton, England. At the conference, Mr. Ashcroft, who was recently elected a member of the British Textile Institute, will present a paper entitled "Industrial Research and the Consumer Target." In this paper Mr. Ashcroft will discuss the role of modern industrial research in developing products of maximum appeal and usefulness to the consumer.

While the annual conference of the British Textile Institute is scheduled for the latter part of May, Mr. Ashcroft plans to arrive in Paris April 28. During the three weeks preceding the conference, Mr. Ashcroft will visit a number of textile firms in France, Holland, Germany and Switzerland in order to answer inquiries regarding two industrial processes, Harristrip and Textralizing, which Alexander Smith is using very successfully in its Yonkers mill and which the company has been licensing to other U. S. textile firms.

Following the conference of the Textile Institute at Brighton, Mr. Ashcroft will visit textile firms in the British midlands and in Scotland.

N.P.A. Surveying Chemical Potential

The National Production Authority, U. S. Department of Commerce, is conducting a survey of the chemical industry to measure the nation's potential for meeting defense and civilian requirements. The survey's three-fold purpose is to determine: (1) Production capacity of the chemical industry. (2) What raw materials and how much of each

are needed in this production. (3) The end-uses of the chemicals; specifically, what products are being manufactured through the use of chemicals and how much is used for each.

More than 100 chemical producers are being asked to report on their production capacity, the raw materials they use and the uses to which the chemicals are put by purchasers. Chemicals being surveyed now include aniline oil, benzene hexachloride, bichromate of soda, calcium carbide, carbon tetrachloride, chromic oxide, DDT, hydrochloric acid, hydrogen peroxide maleic anhydride, metallic sodium, methanol, methyl chloride, phthalic anhydride, phenol, styrene, vinyl acetate, zinc chloride, ethyl alcohol, ethylene glycol and butyl alcohol. N.P.A. said producers of several dozen other chemicals will be included in the survey later.

The survey, N.P.A. said, is not meant as a basis for allocation but to give N.P.A. a working picture of the industry. It is not a continuing survey requiring periodic reports, and chemical producers need not make a report except upon receipt of a survey questionnaire.

D. R. LaFar Heads Carded Yarn Association

Owen Fitzsimons has resigned as president of the Carded Yarn Association and has been elected executive vice-president and treasurer of the association. Mr. Fitzsimons' switch in positions occurred at a recent meeting of the board of directors. D. R. LaFar, Jr., president of a group of textile mills with headquarters in Gastonia, N. C., was elected president of the Carded Yarn Association, succeeding Mr. Fitzsimons. The change in titles was made at the request of Mr. Fitzsimons, who explained that government regulations prohibit paid executives of trade associations from representing their industries in certain discussions with government agencies, and that the Carded Yarn Association could thus present pertinent information in Washington with greater weight if Mr. LaFar appeared there as president rather than board chairman.

The newly-elected president has been chairman of the board of directors since October and retains that post. In addition, he is a member of the association's mobilization committee and has been active in the committee's Washington conferences.

On assuming his new duties, Mr. LaFar stated, "Although Mr. Fitzsimons' action was wholly unexpected, there is no surprise in the quality of spirit which it reveals."

"The industry," Mr. LaFar said, "has never seen a finer example of personal sincerity and devotion to its interests

than has been displayed here by Mr. Fitzsimons, who has served us long and efficiently. He was a major factor in the organization of the Carded Yarn Group in 1936. He served as secretary and treasurer from that time to 1945 when he was elected president of the newly-organized corporate association.

"Our members will never forget the great fight which he so effectively made for us in the trying days of O.P.A. and his fine work since. Although he has chosen to turn over to another the top executive post of the association, we are all happy that in his capacity he will continue to exercise for us the high administrative duties which he knows so well and which are so essential to the life and vigor of the association."

Convert Orlon To Fire-Resistant Fabric

The new Du Pont synthetic, Orlon acrylic fiber, has been converted into a black substance said to have the unusual property of resisting temperatures as high as 1,400° F. This characteristic was discovered by accident in the laboratories of Du Pont in Wilmington, Del., where a piece of woven Orlon was left in an oven and heated accidentally to 275° F. Instead of being ruined, as expected, the fabric was found to have the ability to resist very high heat. It became black in the process, however, and the new kind of Orlon appears to be limited to that color alone. This application of Orlon is so new that plans as to how it is to be utilized are not yet made. However, officials envision its use in the Armed Forces in garments to be worn by fire-fighters who must rescue those from crashed planes, etc.

New Method Of Measuring Fabric Stiffness

N. J. Abbott of the Ontario (Canada) Research Foundation, at a meeting last month in New York City of Committee D-13 on textiles of the American Society for Testing Materials, revealed that a new way has been devised for the measurement of stiffness in textile fabrics which appears promising enough to warrant further investigation. The method was described by Mr. Abbott during a paper session of Subcommittee B-1 on Test Methods.

The new technique uses the cantilever method as suggested by Pierce, Mr. Abbott said. In the new method, it is proposed that the best basis for comparison of fabrics is measurements made at a standard angle of dip, 41 degrees, where the bending length is one-half the length of overhang. The best method of measure of stiffness is

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the flexural rigidity of the fabric, which is its weight per unit area multiplied by the cube of its bending length, he observed.

Second paper session speaker was Dr. L. G. Ray, Jr., of E. I. du Pont de Nemours & Co., who spoke on "Fiber Properties Related to Fabric Resilience and Hand." Hand and resilience can be related to five fundamental fiber properties, Dr. Ray said. These are (1) elastic modulus in tension, (2) shape of the stress-strain curve, (3) ability to recover the work of elongation, (4) shear modulus and (5) degree of anisotropy.

After hearing a report by Louis Tanner, U. S. Customs Laboratory, on proposed revision of the standard for hard scoured and greased wool, the subcommittee agreed to continue work on this subject. When completed, the group will propose changes in Standard D-584 which currently covers that topic in the A.S.T.M. manual.

A number of task groups reported and each group received authority to continue its investigations. These reports were delivered by: Elroy Pohle, U. S. Department of Agriculture, who discussed tests for staple length of grease wool. Werner Mueller, U. S. Department of Agriculture, who gave data on tests for the fineness of mohair. Hugh Christison, Arlington Mills, discussed the work to date on moisture content. Herbert Haller, Forstmann Woolen Co., Passaic, N. J., presented data on tensile strength of wool. Jackson Bauer presented data on alkali solubility and interlaboratory tests on measurement of wool fiber length, standard deviation and coefficient of variation. William McFarland, Alexander Smith & Sons Carpet Co., Yonkers, N. Y., presented data on the variability of the shrinkage in wool.

Committee D-13 will select the second recipient of the Harold DeWitt Smith Medal in time for its presentation at the Fall meeting in the Park Sheraton Hotel, New York City, Oct. 17-18. This medal is a testimonial to the memory of the late Dr. Harold DeWitt Smith and was endowed by Fabric Research Laboratories, Inc., Boston. It was presented for the first time in March, 1950, to Dr. Herbert F. Schiefer of the National Bureau of Standards, Washington, D. C. It is given annually, or at longer periods, to an individual who has made an outstanding contribution to the science of textile fiber utilization.

Dean Malcolm E. Campbell of the School of Textiles, N. C. State College, Raleigh, N. C., has been named as the educator-member of the five-man award committee for the medal. Dean Campbell succeeds Dr. Kenneth L. Hertel

of the physics department, University of Tennessee, Knoxville. Committee members serve for three-year terms.

Synthetic Leaders Meet With N.Y.Q.M.P.A.

Members of the synthetic fabrics industry met April 11 with officials of the New York Quartermaster Procurement Agency to discuss production problems in the manufacturing of synthetic fabrics for the armed forces. The meeting was sponsored by the Quartermaster Association as part of its program of Quartermaster Corps-industry co-operation. Leaders of the synthetic fabrics industry who attended included representatives of the Duplan Corp.; Hess, Goldsmith & Co., Inc.; Bates Fabrics, Inc.; Deering, Milliken & Co., Inc.; and the National Federation of Textiles, Inc. Harry B. Benson, vice-president of Cheney Brothers, Manchester, Conn., served as chairman.

George Dunn of J. P. Stevens & Co., Inc., described results of trials conducted on nylon and rayon rainwear fabrics. Representatives of the Office of the Quartermaster General spoke on the use of substitute synthetic fibers, synthetic fabrics and blended wool fabrics for general wear uniforms. The group also discussed specification requirements and problems related to fabric shrinkage and water repellency.

Calco Official Addresses Chemical Society

A paper, "The Identification of Polymorphic Forms of Crystals by Infrared Spectroscopy," was delivered by Dr. D. N. Kendall, American Cyanamid Co., Calco Chemical Division, at the Spring national meeting of the American Chemical Society held at Boston, Mass., April 3. Dr. Kendall described how infrared technique may be used to determine the crystalline states of organic and inorganic chemicals. He pointed out that the new method successfully complements X-ray and optical microscopical techniques. Dr. Kendall stated that quantitative structural information on dyes and pigments can be obtained by this method. Dr. Kendall is in charge of Calco's infrared spectroscopic work in the photometric laboratory of the application research department. He is a member of the American Chemical Society and the Society of Applied Spectroscopy.

May Standardize Cotton Analysis Equipment

A nationwide interlaboratory program, sponsored by the American Society for Testing Materials, to provide a basis

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for more standardized use of instruments in the analysis of cotton fiber is being spearheaded by the Bureau of Agricultural and Industrial Chemistry, U. S. Department of Agriculture. This agency accepted much of the responsibility for conducting the program because the results promise to lay the foundation for widespread improvement in the evaluation of cotton as an aid to more efficient utilization, according to Dr. G. E. Hilbert, chief of the bureau in Washington.

Dr. Walter M. Scott, assistant chief, is serving as chairman of the sponsoring task group set up by the society under Committee D-13, Subcommittee A-1, Section 1 on cotton; and the Southern Regional Research Laboratory in New Orleans is carrying out the details of the program. T. H. Hopper, head of the laboratory's analytical and physical division, has organized the work and is maintaining contacts with the co-operating laboratories, while the cotton mechanical processing division, under the leadership of R. J. Cheatham, is rendering valuable assistance in the preparation of the cottons selected for check testing.

Eighty of the 154 firms and agencies in the United States known to possess Fibrographs, Micronaires, or Pressley fiber-testing instruments have accepted invitations to participate in this program. Each participating laboratory will analyze by its usual methods identical coded samples of ten cottons, representing several varieties over a wide range of length, strength and fineness. Reports on these tests will be tabulated, using code numbers to identify individual laboratories.

An analysis of the results is expected to provide information leading to more uniform and more effective application of modern textile testing equipment and techniques. The information may also point out opportunities for the improvement or modification of existing equipment and procedures or for the development of entirely new procedures for fiber testing.

Kendall Co. Opens Clark Research Laboratory

Opening of the new Theodore Clark Research Laboratory, 76 Massachusetts Avenue, Cambridge, Mass., was announced April 12 by the Kendall Co., manufacturer of surgical dressings, cotton textiles and allied products. Named in honor of the late Theodore Clark, former vice-president of the Kendall Co. with a life-long devotion to scientific research, this laboratory will conduct research of a pioneering nature both in basic science and on specific company problems under the direction of Dr. Willard M. Bright. The studies will be independent of, but supplemental to the research work carried on by the company's operating divisions. To mark the opening of the new quarters, a reception was held at the Clark Laboratory Thursday afternoon, April 12. Among the guests were Mrs. Theodore Clark, H. P. Kendall, chairman of the board, and R. R. Higgins, president of the Kendall Co.

General Chemical Allocation Order Issued

A mechanism for allocation of scarce chemicals was set up March 16 by the National Production Authority, U. S. Department of Commerce, to assure that vital chemicals will reach critical points in adequate quantity to provide for defense and essential civilian needs. N.P.A. put into effect a basic general chemical allocation order (M-45) which does not in itself place any chemical under allocation,

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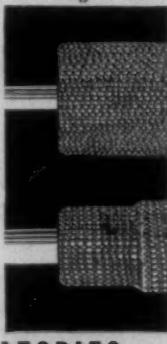
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but provides the means by which any chemical may be allocated when need for regulation is demonstrated. The order, similar to W.P.B. Order M-300 under which chemicals were allocated in World War II, was given unanimous approval recently by the chemical industry advisory committee, which recommended its adoption.

N.P.A. officials said that a continuing study is being made of the complex chemical industry with the objectives of simplifying administration of chemical controls and of holding to a practicable minimum the number of chemicals to be placed under allocation. N.P.A. pointed out that surveys will be made and the industry consulted before any chemical is placed under allocation. This would be done by an amendment to the general order, called a schedule, which would place a given chemical in one of three allocation categories (Appendix A, B, or C).

Both purchaser and supplier would be required to apply to N.P.A. for authority to fill any order for a chemical placed under Appendix A. For Appendix B chemicals, the purchaser would not be required to apply to N.P.A. He would certify, to the supplier, the use to which the chemical would be put, and the supplier would apply to N.P.A. for the allocation. Appendix C provides for an intermediate category between Appendix A (which would apply to materials regarded as most critical) and Appendix B (which would apply to those requiring least allocation control). For smaller quantities of Appendix C materials the purchaser would certify the proposed use to the supplier, who would in turn apply to N.P.A. for the allocation. On large purchases, however, both purchaser and supplier would apply directly to N.P.A.

Details pertaining to allocation of a particular chemical will be included in the schedule placing the material under allocation. These will include the effective date of allocation and all procedures governing the chemical which may be different from or in addition to the general conditions applicable to the appendix to which it is assigned. As an aid to small business, each schedule will provide exemptions for small orders.

N.P.A. officials pointed out that DO rated orders for a particular chemical will be superceded if the chemical is placed under allocation. The order of approval and delivery would be subject to N.P.A. decisions made in the light of all demands for the material and the uses to which it would be put. It was explained that many basic and intermediate chemicals are not required for defense as such, but may be essential to preliminary processes in the manufacture of end-products used for defense. DO rated orders for M.R.O. (maintenance, repair and operating supplies) would likewise be superceded, although full consideration would be given to their importance in indicating supplies necessary to keep the economy in operation.

Color Card Group Names New Directors

Wilfred J. Fullerton, director of fabric development for Dan River Mills, Inc., Danville, Va., and Henry A. Hafner, president of Hafner Associates, Inc., were elected to the board of directors of the Textile Color Card Association at the 36th annual convention of the group last month in New York City. They succeed E. Irving Hanson, former vice-president of Hafner Associates, and Carl E. Kempf, former president of Brewster Hat Co. Henry C. Van Brederode was elected treasurer to succeed Mr. Kempf. All other officers and directors of the association were re-elected.

Court Reaffirms Switzer Patent Claims

Federal Judge Richmond B. Keech of the United States District Court in Washington, D. C., who recently authorized the issuance of a patent on daylight fluorescent fabrics to the Switzers of Cleveland, has denied a motion by which the Commissioner of Patents sought to have the case reopened on a claim of newly-discovered evidence of prior art. The Patent Office motion was based on an affidavit of Alexander Strobl who, at the request of an attorney for Dazian's, Inc., had performed certain tests allegedly according to a prior British patent to Abel and had thereby obtained daylight fluorescent fabrics.

In a decision handed down on March 16, 1951, Judge Keech held as to the merits of the Patent Office motion: "I find that the newly-discovered evidence claimed is insufficient to warrant requesting a remand." The judge further stated: "Although Mr. Strobl states in his affidavit that he performed his experiments following the exact descriptions in the Abel patent, it is apparent on the face of the affidavit, by a comparison of his account of these experiments with the descriptions in the Abel patent, that he did not follow exactly the Abel descriptions. One seeking a method of producing daylight fluorescent fabrics having no knowledge of the Switzer disclosure and finding the Abel patent could not have said: 'This gives me what I wish.'"

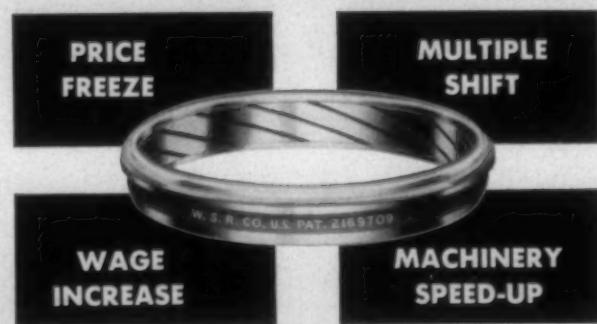
For many years, the Switzers have had before the Patent Office patent claims covering not only the preferred Switzer process of producing daylight fluorescent fabrics, but substantially any daylight fluorescent fabrics now on the market, regardless of the particular process by which the fabric may be produced. The fabrics covered include yarns, felt, knitted textiles and the like, as well as woven fabrics. The Patent Office has been reluctant to issue coverage so broad that it would extend to weavers, knitters, dyers, converters, brokers, etc., as well as to end users of daylight fluorescent fabrics. On Dec. 13, 1950, however, Judge Keech ruled that Joseph L. Switzer, et. al., invented daylight fluorescent fabrics and are entitled to a patent on them, and in refusing to reopen the case the same jurist has now reaffirmed his decision.

M. Hausman & Sons, Inc., of New York City has been licensed by Switzer Bros. to print dye fabrics in daylight fluorescent colors, while a steadily increasing number of responsible firms have obtained Switzer licenses to make and sell daylight fluorescent apparel under the trademark Day-Glo (Reg. U. S. Pat. Off.) Aberfoyle Mfg. Co. of Philadelphia is sales agent for the Switzer Day-Glo yarns, and Rayon Processing Co. of Pawtucket, R. I., is making and selling Day-Glo flock under license from the Switzer firm.

Dye Industry Seeks Load Equalization

The dye industry advisory committee has requested the government to set a maximum percentage of 30 to 50 per cent on the amount of each color which a dye manufacturer must produce to fill defense rated DO orders. This would tend to equalize and diversify the load upon the industry, the committee indicated last month at its first meeting with representatives of the National Production Authority.

A further recommendation was made that N.P.A. exclude processing chemicals used in dye manufacture, from coverage of Regulation 4. A heavy volume of orders classifying these materials as "operating supplies" is draining

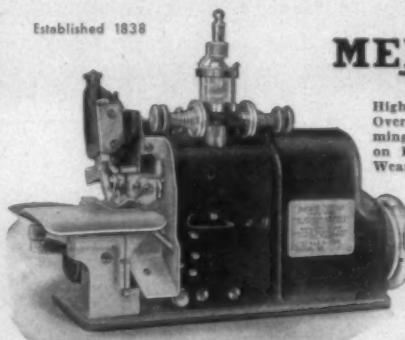


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off chemicals necessary to the dyeing and printing process, producers reported. Classes of chemicals listed in this connection were: hydrosulphides, peroxide, perborate and agents for wetting, disbursing, bleaching, finishing and processing.

The dye industry, if color shifts are kept to a minimum, should be able to meet the Quartermaster Corps' current program of requirements without difficulty, the committee felt. Clarification of Quartermaster forecasts of textile needs for the next three quarters of 1951 was asked, as dye schedules and equipment arrangements for color production must be made months in advance of the orders.

Woolen Industry Meeting Military Demands

Members of the woolen and worsted manufacturers industry advisory committee and officials of the National Production Authority, U. S. Department of Commerce, agreed at a meeting last month that an order limiting the civilian use of apparel wool is not necessary at this time since the industry is meeting current military requirements. Future military requirements may make it necessary, however, to place some type of control on wool, N.P.A. told committee members. Approximately 35 per cent of their production is going to fill current defense orders, industry members said.

Industry members asserted that there is a shortage of wool in this country which will become more serious if some action is not taken to obtain foreign wool supplies in greater volume. A delay in the placing of defense orders with the industry, and a sharp rise in the price of foreign supplies were cited by the industry as reasons for the present shortage. Approximately 75 per cent of the apparel class wool consumed in this country comes primarily from Australia, South America, New Zealand and South Africa, it was pointed out.

Upon industry's recommendation, N.P.A. appointed a task group, a sub-committee of the advisory committee, to explore ways and means of obtaining larger quantities of wool from foreign sources. Task group's members are: R. W. Vietch, American Woolen Co., Inc., New York City; Lewis A. Hird, Samuel Hird and Sons, Inc., Garfield, N. J.; and, Kenneth W. Marriner, Francis Wiley and Co., Boston.

Cotton Usage Tops In Bedspread Industry

Cotton accounts for approximately 94 per cent of the total material used by the bedspread industry, claiming more than 200,000 of the 215,000 bale equivalents consumed by the industry during 1949, according to the National Cotton Council's preliminary survey released Jan. 12. About 21,000,000 spreads were produced in 1949, the latest year for which market information is available, totaling a wholesale value of approximately \$80,000,000.

Of the three divisions of the bedspread industry, tufted spreads accounted for about 50 per cent of the total production. Approximately 125,000 bales of cotton were consumed in the production of 11,100,000 spreads. Cotton's share of all fibers used in tufted spreads amounted to about 99 per cent of the total. Approximately \$45,000,000 was grossed from this branch alone. The council's survey revealed that cotton accounted for about 93 per cent of the materials used in the production of Jacquard and other types of woven bedspreads. Cotton claimed around 75,000

of the 83,000 bale equivalents used in the production of more than 9,000,000 spreads which amounted to a wholesale volume of \$29,000,000.

Fragmentary information available on the size of the tailored bedspread market indicated the consumption of 1,500 bales of cotton out of the total of 4,900 bale equivalents used. Offering substantial opportunities for expansion in consumption, this market produces about 750,000 spreads, amounting to an approximate \$6,000,000 wholesale market.

This industrywide survey to determine cotton's standing in the bedspread industry was conducted by the council's market research department. It is based on personal interviews with executives in manufacturing plants, sales offices, textile mills and allied groups. It was released recently in a booklet entitled, *Cotton in the Bedspread Industry*.

Announce Day-Glo Mercerized Cotton Yarns

Aberfoyle Mfg. Co. of Philadelphia, Pa., and Switzer Brothers, Inc., of Cleveland, Ohio, have announced successful application of daylight fluorescent dyes to mercerized cotton for the first time following two years of joint and intensive research by teams of chemists and engineers. The result, according to J. P. Holt, vice-president and treasurer of Aberfoyle, is a completely new type of yarn with a different chemical structure than any known yarn produced prior to this. The new yarn, according to Mr. Holt, will be marketed under the registered trade name of Day-Glo, now used for daylight fluorescent dyed synthetics sold by Aberfoyle as sales agent for Switzer.

The new yarn is now out of the laboratory stage and

is moving from the pilot plant into limited production, he announced. Special machinery and equipment have been designed for its production and special personnel has been assigned to supervise the small scale production.

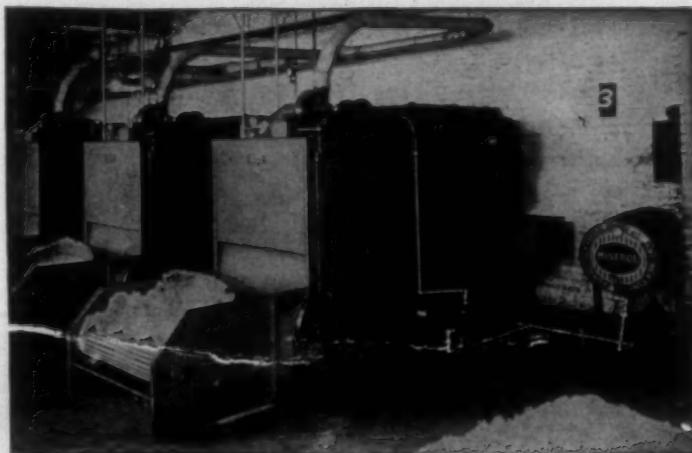
Price factors, Mr. Holt said, have not yet been determined even though researchers have satisfied themselves and the sponsoring firms that all characteristics of Day-Glo cotton are commercially acceptable. "At this point we cannot determine just when this new Day-Glo cotton will be ready for commercial production," he said. "We are quite hopeful that the factory production will not present any insurmountable difficulties. However, further analysis will be necessary and further experimenting will be required." He disclosed that the new yarn is designed to contain fluorescent dyes and is "revolutionary" in its characteristics.

"This new yarn has other unusual and interesting characteristics which cannot be revealed until we are absolutely certain of every detail," he said. The joint research team determined that the Day-Glo cotton has acceptable light fastness, wash fastness, depth of shade, extraordinary brightness of color, excellent wearability and no loss of strength during the processing.

The two firms decided to launch into the new venture following the tremendous success of their Day-Glo synthetic yarns. The teams worked in the Switzer plant in Cleveland and at the Aberfoyle plants in Chester, Pa.; Bridgeton, N. J.; White Plains, N. Y., and Guelph, Ontario, Canada. Joseph Switzer headed the operation which worked two shifts at times to expedite the research.

If successful this new yarn will add to the field of available daylight fluorescent yarns and open up new mer-

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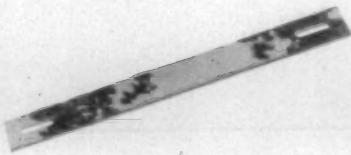
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chandising phases wherever colored yarns and fabrics are used," he added. The companies have no idea of using Day-Glo cotton to replace the Day-Glo synthetics, he said. In fact, the two blend nicely and complement each other.

Dealing With Navy Purchasing Office

Location of the Navy Purchasing Office in the same building with the New York Quartermaster Procurement Agency has led to considerable confusion among suppliers who have occasion to deal with one or both of these large procurement offices, it was revealed recently by Capt. G. R. Kinnear, U.S.N., officer-in-charge of the New York Navy Purchasing Office, 111 East 16th Street, New York 3, N. Y.

In an effort to clarify the situation, Captain Kinnear pointed out that, while the Navy, Army and Air Force have become unified under the Department of Defense, each of these military services continues to operate completely separate purchasing offices. The Navy Purchasing Office and N.Y.Q.M.P.A., although occupying space in the same building, have not been combined or consolidated in any way, said Captain Kinnear. There is, of course, he continued, constant Navy-Army collaboration involving the maintenance of close liaison between both buying offices for the providing of free interchange of information on all factors affecting purchases for the same or similar commodities which are made by these agencies.

The Navy Purchasing Office operates as a field procurement agency for the Bureau of Supplies and Accounts, Department of the Navy, explained Captain Kinnear. It buys clothing and textiles, and chemicals (Class 51) on a Navy-wide basis. It also has several procurement assignments for the Army and Air Force.

In order to insure maximum speed and operating efficiency, concluded Captain Kinnear, manufacturers, regular dealers, and bona fide manufacturers' agents desiring to be listed as potential sources of supply for items purchased by the Navy—or who wish to contact the Navy Purchasing Office for any other reason—should be careful to address all communications to the Officer-in-Charge, Navy Purchasing Office, 111 East 16th Street, New York 3, N. Y.

U.S. Cottons Equal Or Surpass Egyptian

A long standing belief was exploded by the National Cotton Council recently when it revealed results of a survey which showed that the strength of yarns made from American grown long staple cottons equal or surpassed that of Egyptian cottons. The survey proves that American cotton breeders have developed extra long staple varieties that are as good or better than the best Egyptian cottons, the council pointed out.

Six of eight cotton mills reporting to the council on the performance of Amsak cotton, an American variety, declared that yarn spun from this fiber was as strong or stronger than that spun from Karnak, the finest Egyptian cotton. Amsak is grown in Arizona, New Mexico, and the area around El Paso, Tex. The eight mills—representing more than half the spindles in this country engaged in spinning extra long staples—reported on the commercial performances of more than 3,000 bales of Amsak. Both American and Egyptian cottons were processed under the same conditions, with no deviation from the usual routine in the mills concerned.

Comments from the six mills on the gray yarn strength

of Amsak when compared to Karnak ranged from "no difference" to "18 per cent stronger." Two mills reported Amsak weaker—one by seven per cent, and the second, by three per cent. Spinners reported also that Amsak processed economically and that the cotton is useful in blends with Karnak and other long staples.

Products in which extra long staples are required must meet high appearance standards. On the average Amsak fulfilled these requirements. In gray yarn appearance four mills reported Amsak equal or better than Karnak. Three reported the American cotton inferior in grade and one reported Amsak neppier. Neps are small tangles of fiber which mar the appearance of the finished textile. The only comments on difficulties in processing Amsak noted that it is slightly charged with static electricity and that there is occasional "honeydew" on the fiber.

Four mills reporting on the processing of 384 bales of Pima 32, an extra long staple variety grown in the same area as Amsak, rated its performance about equal to Amsak. Three of these mills rated Pima 32 yarn as equal to or stronger than yarn made from Karnak, the difference in one case being 12 per cent in favor of Pima. One mill found Amsak to be two per cent weaker than Karnak.

Comparison of the spinning qualities of the American and Egyptian cottons was based on the performance of equal grades and staples.

Develop New Fiber As Jute Substitute

E. C. Cubas, a native of Havana, Cuba, and presently a student in the School of Textile Engineering at Georgia

Institute of Technology, Atlanta, revealed in a recent issue of *The Georgia Tech Engineer* that a new fiber plant grown successfully today in South America is emerging as an excellent substitute for jute. Known as kenaf, the fiber is now being grown successfully in Cuba and has a potential \$120,000,000 a year market in the United States. It can substitute satisfactorily for jute in the manufacture of gunny cloth, cordage, rug backing and similar products.

Although kenaf is regarded as a new fiber plant in this area of the world, it has been known and used as a source of fiber for many years in some of the older countries, Mr. Cubas says. Russia and Java, he reports, have planted sizeable crops of kenaf. For some purposes it is considered better than jute. In chemical composition it is similar to jute and has longer fibers. They can be spun on jute machinery.

In comparative tests recently made in weaving kenaf and jute sacks, the former made the best showing, the Tech student reports. "The establishment of kenaf as a regular fiber crop seems to be feasible in those countries where it can be grown with relative ease and where there is also a strong domestic market," Mr. Cubas asserts.

"In Cuba, where most of the research work has been done and where the local consumption of sugar bags alone amounts to \$20,000,000 annually, the crop seems to promise a good future." He says Cuba also could supply a large amount of the fiber needed in the United States. This would prove especially advantageous in view of the nearness of Cuba and "the fact that the cultivation of kenaf will not interfere with that of sugar." It would assure this nation a supply at all times, regardless of international troubles.

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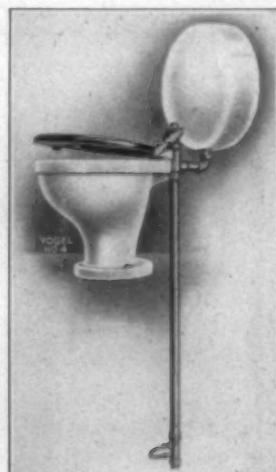


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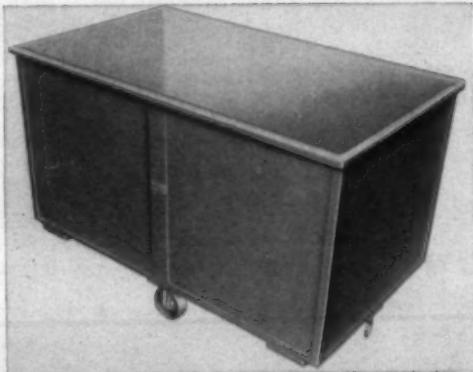
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Spinners Maintain Unfilled Order Backlog

Selling by carded cotton sales yarn mills during March was in sufficient volume to maintain the spinners' sold-ahead position on about an even keel throughout the month, the Textile Information Service reports. According to Carded Yarn Association statistics covering approximately 1.4 million member spindles, sales kept pace with production and shipments leaving unfilled orders on spinners' books on March 31 at a level equal to 15.65 weeks' production compared with a backlog of 15.29 weeks' output on March 3. Aggregate of unfilled orders at the month's end was 44.60 times the stocks on hand as compared to a backlog 45.94 times the yarn stocks held at the beginning of March.

Total yarn in stock, including yarn made for future deliveries against unfilled orders, amounted to 35 per cent of a week's production on March 31; inventories on March 3 were equal to 33 1/3 per cent of a single week's output. Statistics for the week ended March 31, according to the Textile Information Service, showed that 30.1 per cent of production consisted of knitting yarn, 57.8 per cent weaving yarn, and 12.1 per cent all others. In the week of March 3, the production percentages were 30.6, 57.3 and 12.1, respectively.

N.P.A. Seeks To Maintain Cotton Duck Output

The National Production Authority, U. S. Department of Commerce, March 31 issued two orders designed to maintain production of cotton duck to meet defense and essential civilian requirements. Although the current annual rate of approximately 300 million yards is well above the 1946-48 average of 225 million yards, more production is needed to meet heavy military, industrial and agricultural requirements, N.P.A. said. Cotton duck production is now running at less than half the World War II peak of 606 million yards a year attained in 1942.

N.P.A. is now working with textile plants on the conversion of carpet and upholstery looms to duck weaving, although no immediate increase in duck production is expected. This is due, N.P.A. explained, to mechanical problems encountered in changing equipment over to duck weaving and to the short supply of carded cotton yarns from which duck and webbing are made.

As an interim measure, pending future allocation of cotton duck, one of the orders (M-53) requires producers to accept defense rated (DO) orders up to 80 per cent by weight of their currently scheduled production. To prevent any loss of output through manufacturers' shifting from duck weaving to the production of other textile products, the order states that all looms making duck during the week beginning Jan. 14, 1951, may not be used in the manufacture of any other fabric. Industrial uses of duck range from such items as filter cloths for chemical and

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food processing to conveyor belts. In agriculture, duck is used for harvesting aprons, cotton pick sacks, fumigation tents for citrus fruit, tarpaulins and many other purposes.

Since cotton duck and webbing production is dependent on the supply of carded cotton sales yarn, N.P.A. also amended its yarn order (M-23) to increase the percentage of production yarn spinners must accept for DO orders. M-23 originally required producers to reserve up to ten per cent of their total monthly production for filling rated orders. The March 31 amendment establishes monthly reserves by types of yarn, as follows: (1) sixes to twenty-twos, single or in any ply, 30 per cent by weight; (2) yarns finer than twenty-twos, 20 per cent; and (3) yarns coarser than sixes, 20 per cent. The monthly reserves are based on the average monthly shipments during the last half of 1950.

The amendment also states that all spindles producing these specified groups of yarns on March 12, 1951, may not be used for producing other carded cotton yarns. The present annual production of carded cotton sales yarns is estimated at approximately 600 million pounds.

S. C. Cotton Mfrs. To Meet May 17-19

Members of the South Carolina Cotton Manufacturers Association will gather May 17-19 at Sea Island, Ga., for their annual convention. Although specific topics to be discussed at the convention have not been determined, John K. Cauthen, executive vice-president of the association, has announced the following general program for the parley:

May 17—Afternoon, board of directors meeting; evening, reception. May 18—Morning, general business session and annual meeting of J. E. Sirrine Textile Foundation; evening, annual dinner. May 19—Morning, final business session and election of officers.

Present officers of the association are C. B. Hayes of Lyman, vice-president of Pacific Mills, president; W. H. Beattie of Greenville, president of Woodside Mills, vice-president; and Mr. Cauthen. The program committee for the convention includes J. A. Chapman of Inman Mills; B. F. Hagood of Glenwood Mills, Easley; L. O. Hammett of Chiquola Mfg. Co., Honea Path; J. B. Harris of Greenwood Mills; and Mr. Cauthen.

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and its subsidiaries, Hall Laboratories, Inc., and Calgon, Inc., the display illustrates the wide variety of industries served by these companies. The textile exhibit includes graphic drawings representing textile mill operations, together with flow diagrams of cotton, rayon and woolen mills and samples of fabrics processed with Calgon. Twelve uses of this glassy phosphate water conditioner in scouring, dyeing, sizing, kier boiling, delustering and other operations are listed.

The textile industry is also among those utilizing controls manufactured by the Hagan Corp. and served by Hall Laboratories, Inc., as water consultants. A miniature woolen mill and rayon and cotton mill are among the buildings of a "model city" in an activated diorama designed to acquaint visitors and new employees with the types of industry served by the 17 divisions of the Hagan organization. Pages of a "history book" turn, and as each division is mentioned, lights flash on the miniature buildings representing the types of industry served by it. At the climax, summarizing all of the services, all of the buildings are illuminated. The text points out that 94 of the 100 largest companies in America are served by the Hagan group.

Change 'DO' Rule On Rayon Tire Cord Yarn

The National Production Authority, Department of Commerce recently acted to assure the prompt and orderly filling of DO rated orders for high tenacity rayon tire yarn. To meet increased defense requirements, effective immediately, producers of this yarn are required to accept DO rated orders up to 15 per cent of their scheduled monthly production. Prior to this action, they were required to take orders up to ten per cent of production.

The high tenacity rayon yarn is used chiefly in the production of tires, N.P.A. said, but it also has other defense uses, such as in cargo and flare parachutes and airplane fuel cell fabric. N.P.A. pointed out that the order does not apply to textile yarn where, as yet, there has been no evidence of inequitable distribution.

In explaining its action, N.P.A. said that the majority of the high tenacity rayon tire yarn producers have been booking DO rated orders in excess of ten per cent of their scheduled monthly production because of increased demand. In some instances, however, defense orders have not been accepted by manufacturers because they had already more than filled the ten per cent requirement, N.P.A. said.

SOUTHERN SOURCES OF SUPPLY for Equipment, Parts, Material, Service

Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information, service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

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— TEXTILE INDUSTRY HAPPENINGS AS THE MONTH ENDED —

PERSONAL NEWS

Edward P. Killackey has been named treasurer of Celanese Corp. of America succeeding George H. Richards, who remains a vice-president. . . . Other executive promotions include: William O'Donovan to vice-president in charge of general sales; Bjorn Anderson to vice-president in charge of research, and K. C. Loughlin to vice-president in charge of Southern sales.

Glenn Harden, daughter of John Harden, vice-president in charge of public relations at Burlington Mill Corp., Greensboro, N. C., recently was named editor of *The Daily Tar Heel*, student publication at the University of North Carolina.

Herman Cone, president of Cone Mills Corp. of Greensboro, N. C., has assumed duties as a 1951 director of the National Association of Manufacturers.



Francis H. M. New has been appointed Southern representative for Riggs & Lombard, Inc., Lowell, Mass., manufacturer of finishing and drying equipment. Before joining Riggs & Lombard Mr. New was engaged in color shop, dyehouse, printing and engraving for textiles. He also owned and managed a business for erecting and servicing mechanical power transmission equipment and other machinery for the textile industry. Prior to the war Mr. New served for three years as plant engineer for Glendale Mills, Inc. He will be located at Greenville, S. C., and his address will be P. O. Box 1083.

Charles E. Daniel, president of Daniel Construction Co., Greenville, S. C., builder of many large manufacturing plants throughout the country, recently received an honorary Doctor of Laws degree from Furman University, Greenville, at ceremonies celebrating Furman's 125th academic convocation. Mr. Daniel also is a life member of the board of trustees of Clemson (S. C.) College. . . . P. S. Bailey, president of Lydia and Clinton Cotton Mills, Clinton, S. C., has been named to receive the Presbyterian College Gold P. Alumni Award for 1951. The award is given annually to the alumnus who has made outstanding progress and achievement in his chosen profession. The award will be made as part of the June commencement exercises. Presbyterian College is located at Clinton. . . . Robert O. Arnold, president of Covington (Ga.) Mills, April 11 was elected chairman of the board of regents of the University System of Georgia. . . . Elliott W. Springs, president of Springs Cotton Mills, Lancaster, S. C., and Dr. L. P. Hollis of Greenville, S. C., who was connected with the

old Parker chain of mills before becoming connected with the Parker district school system in Greenville, have been appointed to the State Educational Finance Commission by South Carolina's Governor James Byrnes. The commission will be charged with the responsibilities of administering the \$75,000,000 school building program and state transportation system as set out in the 1951-52 state appropriation bill.

H. L. Pratt, director of the Columbia (S. C.) Mills laboratory, has been selected along with ten other textile experts in the United States to go to England next month for a survey of the English textile industry. The group, which will study the English industry for about three weeks, will be guests of the British Textile Association.

Dr. Ernest K. Gladding will retire June 1 as director of the development department of E. I. du Pont de Nemours & Co., Inc., and Henry E. Ford, assistant director of the department since 1942, will succeed him. Dr. Gladding, who has been head of the department since 1942, has been with Du Pont for 41 years. Mr. Ford joined Du Pont immediately after his graduation from the University of Pennsylvania in 1922. . . . Frank C. Evans, who has been director of Du Pont's service department for 16 years, also will retire June 1 and will be succeeded by Emile F. du Pont, currently director of employee relations. Mr. Evans joined the company in 1915 as a chemist at the Repauno Works of the explosives department in Gibbstown, N. J. Mr. du Pont, a great-great-grandson of the founder of the company, started with the firm in 1923 as a student operator in the Arlington, N. J., plastics plant after finishing his studies at the U. S. Naval Academy and Yale.

Floyd W. Jefferson, Jr., of Iselin-Jefferson Co., Inc., recently was elected to the board of directors of the Association of Cotton Textile Merchants of New York. Mr. Jefferson succeeds for the unexpired term of Charles M. McLeod of the same firm, who resigned from the association board.

Robert Childress has been promoted from loom fixer in the Lynchburg (Va.) Division of Consolidated Textile Co. to assistant overseer in the weave room.

C. O. Taylor, for the past five years second hand in the weave room at the Manchester, Ga., plant of Callaway Mills Co., has been promoted to assistant overseer of weaving. Mr. Taylor has been associated with Callaway for 15 years. . . . Joe R. Williams, a native Texan and a graduate in textile engineering from Texas Technological College, has been promoted to second hand in the Manchester weave room to succeed Mr. Taylor. Mr. Williams has been employed in the weave room since June, 1949. . . . William Phelps has been pro-

moted from loom fixer to second hand in the weave room. Mr. Phelps has been with the company since June, 1946.

J. Kenneth Sumner has joined the sales staff of Standard Mill Supply, Inc., Charlotte, N. C., which is Southern sales agent for Standard Mill Supply Co. of Pawtucket, R. I. Prior to joining the Charlotte firm Mr. Sumner represented National Ring Traveler Co. in North Carolina, Virginia and Tennessee for five years.

S. C. Veney has resigned as Southern division manager for the Duplan Corp., with headquarters in Greensboro, N. C. He has not made known his future plans. . . . It is reported that B. E. Smith has resigned as manager of Duplan's Lincolnton, N. C., plant and has been temporarily succeeded by Steven Kuchar, formerly with the Hazleton, Pa., plant.

H. Gordon Smith, vice-president and general manager of the textile division of United States Rubber Co., has been elected to the board of directors of the company.

William N. Banks, president of Grantville (Ga.) Mills, and Richard W. Courts, Jr., of Courts & Co., Atlanta, Ga., were included in the list of 25 of the South's foremost leaders for 1951 recently selected by editors of *Dixie Business*, journal published in Atlanta, Ga.

Charles Cook, general overseer in charge of the third shift at Spartan Mills, Spartanburg, S. C., has been recalled to duty by the Air Force. Major Cook will be stationed at Kelly Field, Texas.



B. Gales McClintock has been appointed sales representative in South Carolina for Aldrich Machine Works of Greenwood, S. C. Mr. McClintock, who previously was sales representative in Georgia, Alabama and Tennessee for Crompton & Knowles Loom Works, had been associated with that firm for the past 10½ years, including four years of service during World War II. He will continue to reside at Charlotte, N. C.

C. Arthur Cook, secretary, treasurer and cotton buyer of West Boylston Mfg. Co., Montgomery, Ala., April 13 celebrated his 51st anniversary with the firm.

Avery Neaves, for more than 35 years associated with Chatham Mfg. Co., Elkin, N. C., has been selected as the man to be honored by an annual college scholarship to be established this year by the Chatham Foundation. Mr. Neaves joined the firm in the shipping department in 1912. When illness forced his retirement a little more than two years ago he left behind an envi-

able record of success as general superintendent of the company, as a vice-president and as a member of the board of directors.

Harold V. Edwards, for the past year second hand in the spinning room of Mill No. 2 of Goodyear Clearwater Mills at Rockmart, Ga., has been promoted to third shift superintendent at Mill No. 3 at Atco, Ga.

Luther H. Hodges, formerly general manager and vice-president of Fieldcrest Mills, a division of Marshall Field & Co., recently resigned as chief of the E.C.A. industry division in Western Germany. He plans to sail May 17 for his return to the United States.

Dr. Otto F. Haas, a director of Rohm & Haas Co. for the past several years, April 17 was elected to the newly-created post of vice-president. Donald F. Murphy, assistant sales manager of the chemicals and plastics division, was appointed to the newly-created post of assistant secretary. All officers and directors of the firm were re-elected.

Don S. Holt has been elected a vice-president of Cannon Mills Co., Kannapolis, N. C. Mr. Holt succeeds Alexander R. Howard who retired early this year as vice-president but remains on the board. All other officers of the firm were re-elected. . . . Hubert W. Safriet has severed a 22-year connection with Cannon Mills Co. to become a vice-president of Cabarrus Bank & Trust Co. in Kannapolis, N. C.

Prof. Edward R. Schwarz, head of the textile division of the Massachusetts Institute of Technology, has been named to receive the Harold DeWitt Smith Memorial Medal, according to an announcement April 26 by the American Society for Testing Materials, Philadelphia. The award will be made in New York at the October meeting of A.S.T.M. Committee D-13 on textile materials.

H. Richard Lane, chairman of the executive committee of the Kendall Co., Boston, Mass., recently was named to assume overall responsibility for the Dartmouth Development Program following the annual Spring meeting of the college board of trustees. Mr. Lane also will direct work of the Dartmouth College Development Council, of which he recently was elected chairman.

James R. Hood has been appointed manager of the H. F. Livermore Corp. warehouse in Greenville, S. C. Prior to joining Livermore in Greenville two years ago, Mr. Hood was connected with Woodside Mills in Easley, S. C.

H. L. Hagerman has retired from the partnership of J. E. Sirrine Co., Greenville, S. C., because of ill health.

Ernest A. Johnson is now superintendent of Dallas (N. C.) Mills. Prior to joining Dallas Mills Mr. Johnson was overseer of carding and spinning at Jefferson (Ga.) Mills and before that was associated with Avondale Mills, Sylacauga, Ala. . . . Other recent personnel changes and promotions include: Frank Davis to overseer of weaving; Clarence Tony, second shift overseer

of weaving; S. Wyatt, carder; Bob Hogwood, spinner; Walt Keesler, master mechanic; S. F. Fields, superintendent on the second shift, and G. C. Hargroves, superintendent on the third shift.

Walser A. Blackwood, for the past 15 years assistant general manager of the Mayodan (N. C.) Plant of Washington Mills Co., Winston-Salem, N. C., has been appointed production manager of the firm. He will move to Winston-Salem about June 1 to make his home. He is a 1934 graduate of the School of Textiles at North Carolina State College.

William E. Robinson, a graduate of the University of North Carolina and a former professional baseball player, has been named personnel manager and recreational director at Groves Thread Co., Inc., Gastonia, N. C.

George W. Marshall, Jr., and Alvin F. Heinsohn have been elected vice-presidents of Raybestos-Manhattan, Inc. Both are directors of the firm. Mr. Marshall, who has been sales manager of the company's asbestos products division since 1947, will continue to direct sales activities on asbestos brake linings, clutch facings, asbestos textiles, mechanical packings and powdered metal friction material. Mr. Heinsohn will be vice-president in charge of the company's General Asbestos and Rubber Division at North Charleston, S. C. He has been general manager of the North Charleston plant since 1944. . . . Other officers elected were W. Ward Kievit of Passaic, N. J., assistant treasurer; William H. White of Passaic, assistant secretary, and Charles J. Geilfuss of North Charleston, assistant secretary.

R. Lee Pickens has resigned as a sales representative for Celanese Corp. of America and his territory, consisting of the western sections of North and South Carolina, has been taken over by W. D. Clark, Jr., who formerly covered Alabama and Georgia.

Edwin S. Garverich has been named manager of technical service for specialty products of the Pennsylvania Salt Mfg. Co., Philadelphia.

Elmer H. Rossin has been appointed technical service manager of the textile chemicals sales department of Monsanto Chemical Co.'s Merrimac Division. Mr. Rossin succeeds Francis K. Burr, who resigned to join Burlington Mills Corp. Mr. Rossin has been connected with Monsanto since 1943.

Ellison A. Smyth of the Charlotte, N. C., office of H & B American Machine Co., resigned April 30 as vice-president in charge of Southern sales and as a director of the firm. Charlotte office personnel will be continued without change, it is reported. . . . Robert D. Stock, service manager of the H & B Atlanta, Ga., office, is severing his connection with the concern June 1. Mr. Stock has been with the company for about 35 years.

OBITUARIES

David W. Anderson, 74, who retired in 1946 after 50 years' service with Pacolet (S.C.) Mfg. Co., died April 12 at a hos-

pital in Spartanburg, S. C., after an illness of ten days. He served as president and secretary of Pacolet and also as president of Judson Mills, Greenville, S. C.; Monarch Mills, Union, S. C., and Lockhart (S. C.) Mills. Surviving are his wife, three daughters, one son, two sisters and three brothers.

Amos M. Bowen, 75, president and treasurer of U. S. Ring Traveler Co., died recently at his home in Providence, R. I. Survivors include his wife, two brothers and five sisters.

Elmer B. Mathewson, 48, who recently joined Textileather Corp., Toledo, Ohio, as assistant to the president, died April 7. Mr. Mathewson formerly was executive vice-president and a director of North Star Woolen Mill Co., which recently moved from Minneapolis, Minn., to Lima, Ohio. His other previous associations include Wormalds & Walker, Ltd., of Desbury, Yorkshire, England, American Thread Co. and the Kendall Co. Surviving are his wife, his parents and a sister.

Fred Neal, 54, paymaster at Beaumont Mills, Spartanburg, S. C., died April 21. Surviving are his wife, two daughters, two sons, two sisters and five brothers.

Fred S. Rush, 41, superintendent of spinning at the Lancaster, S. C., plant of Springs Cotton Mills, died April 15. A 1930 graduate of Clemson (S. C.) College, Mr. Rush was associated with Martel Mills before joining Springs in 1939. He is survived by his wife, a daughter, his father and stepmother, a brother and a half sister.

Daniel Small, 34, textile editor of the *Journal of Commerce*, died April 15. Mr. Small joined the publication in August, 1945, as a market reporter in the textile division. His wife and a daughter survive.

Meyer Sternberger, 71, connected with the administration of Revolution Mill of Cone Mills Corp., Greensboro, N. C., until his retirement several years ago, died recently in Savannah, Ga., while enroute to Florida for a vacation. His father, H. Sternberger, and an uncle, E. Sternberger, founded Revolution Mill. He is survived by his wife, two daughters, a brother and two sisters.

Charles Williams, 55, foreman of the picker room at Piedmont Cotton Mills, Egan, Ga., was killed April 17 while attempting to clear a picker roller. His left leg was caught in the spikes on the roller and he was drawn between two large spike rollers. Surviving are his wife, four sons, three daughters and four sisters.

MILL NEWS

ERWIN, N. C.—The State Utilities Commission April 10 granted a certificate of convenience and necessity to Erwin Mills, Inc., to operate a water and sewage system at Erwin. The company informed the commission that it is planning to sell 675 houses to employees and that a monthly rate of \$1.50 would be charge for water and sewage service.

MURPHY, N. C.—Duffy Silk Co. of Buffalo, N. Y., has announced plans for

BEFORE CLOSING DOWN

erection of a new silk throwing plant near Murphy. Construction is expected to get under way in May. C. M. Guest & Sons of Greensboro, N. C., is the contractor, and Biberstein & Bowles, Inc., of Charlotte, N. C., the architect.

HALIFAX, VA.—Ground has been broken for construction of an addition to Halifax Worsted Mills which will add approximately 30 per cent to the floor space of the plant. The new unit will process scoured wool into wool top. About 75 operatives will be added to the payroll.

HANES, N. C.—Expansion of carding and spinning departments is proposed by P. H. Hanes Knitting Co. in a construction project at its Mill No. 4 at Hanes. A two-story and basement brick and steel structure, containing about 55,000 square feet, is included in plans prepared by J. N. Pease & Co., Charlotte, N. C., engineer and architect. On the first floor of the proposed addition will be a card room, with a new spinning room planned for the second floor. The basement will provide storage space and facilities for trucks.

MILLEDGEVILLE, GA.—An offer of \$2,115,051 by Milton Gordon of New York was highest of three bids opened April 17 in Atlanta, Ga., by the General Services Administration for the government's large naval ordnance plant here. A bid of \$1,500,000 was entered by J. P. Stevens & Co., Inc., which had leased the plant from the government and is now operating it as a woolen mill. A clause in the bid advertisements would allow Stevens to obtain the plant by matching the highest bidder. Stevens had until April 27, or ten days, to act.

LYNCHBURG, VA.—Consolidated Textile Co., Inc., has agreed to contribute \$62,500, over a period of five years, to Lynchburg General Hospital.

MCMINNVILLE, TENN.—Plans are being readied by Rockford (Ill.) Textile Mills, Inc., for construction of a building to house a new yarn mill here. The new 16,000 square foot plant will be erected on property purchased from Tenn-Rock Hosiery Co. It will be operated separately from Tenn-Rock, although owners of the hosiery company are interested in the new firm.

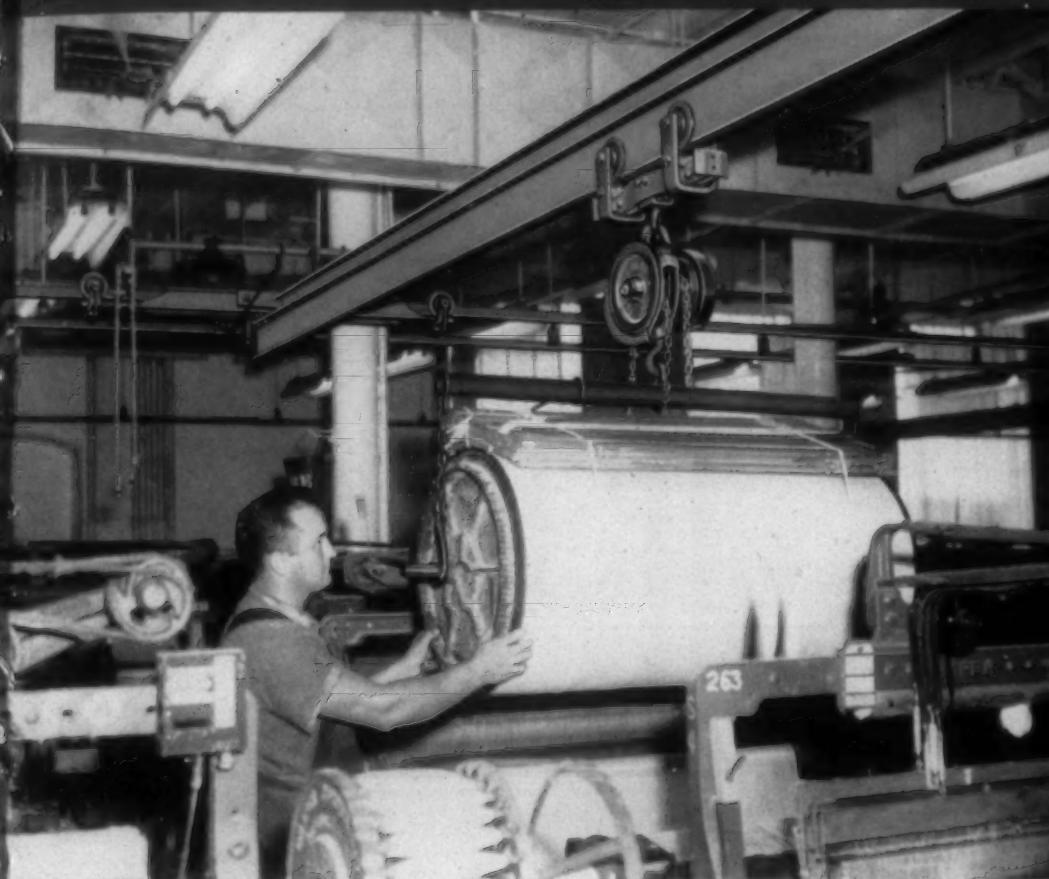
CHARLESTON, S. C.—Potomac Yarn Co., Washington, D. C., will begin operating a wool processing plant here in May. Potomac has purchased two buildings containing 9,000 square feet. W. Dorsey Young, president, revealed that plans are eventually to move headquarters of the company to Charleston.

SPARTANBURG, S. C.—Dixie Duck Mill, a new concern, is expected to begin operations soon employing about 120 persons weaving duck for the armed forces. One hundred twenty-two looms and six filling twisters were scheduled to have been installed by the end of April. Dixie Duck Mill will be located in a three-story building formerly occupied by Warrior Duck Mill. Roy Turner, former third shift supervisor at Beaumont Mills, is superintendent of the new plant.

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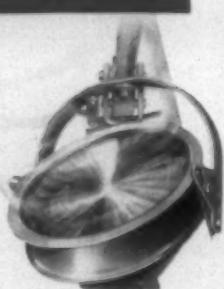
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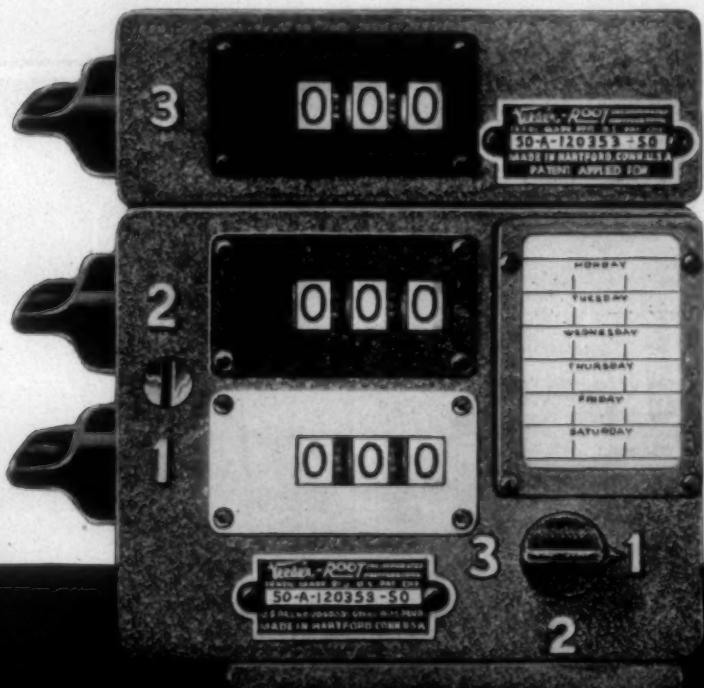
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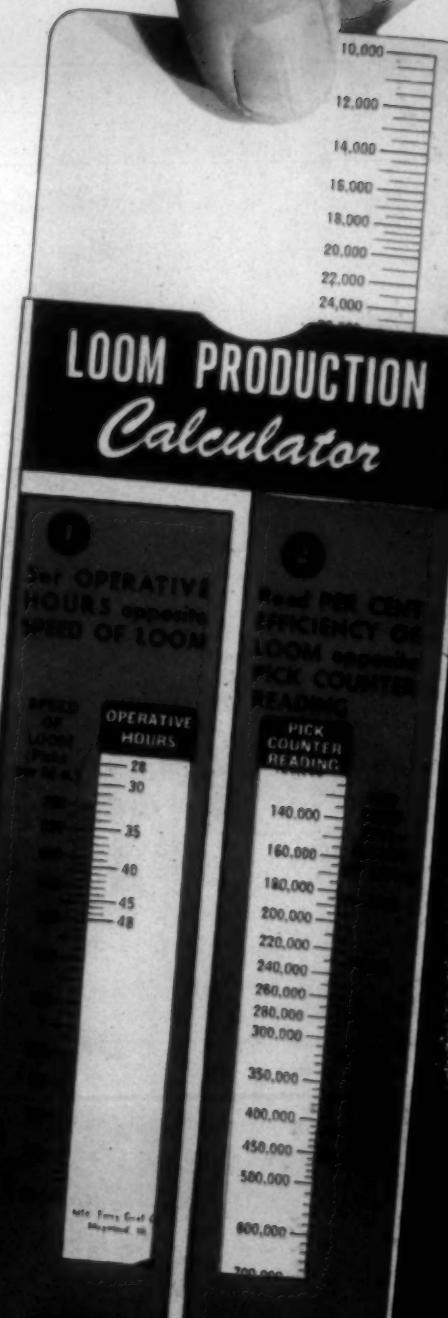


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